

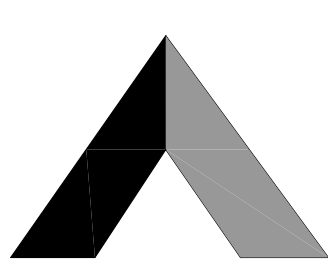
APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____



CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

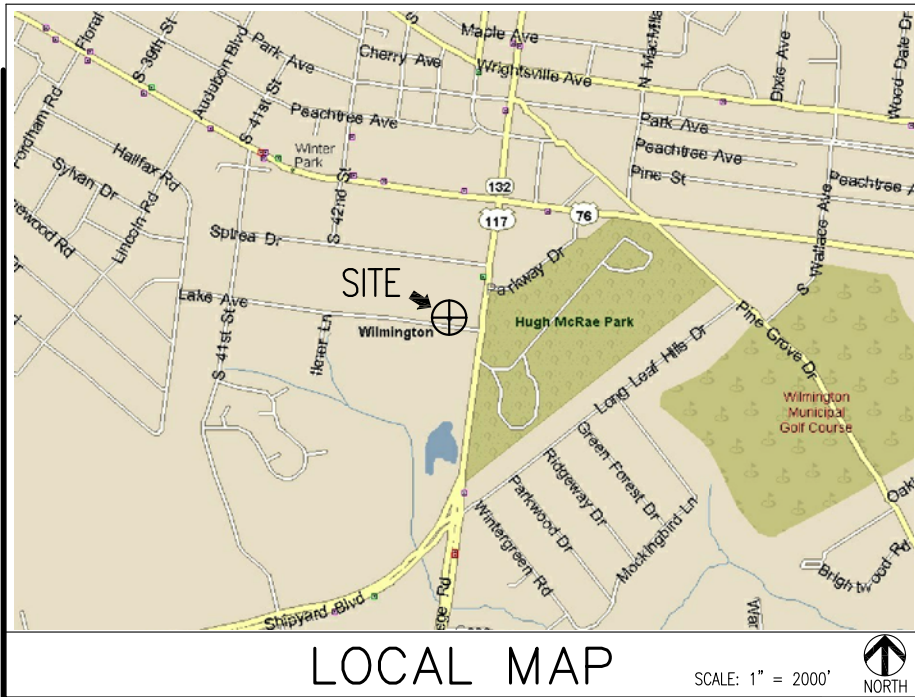
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____



VICINITY MAP

SCALE: 1" = 20 MILES



LOCAL MAP

SCALE: 1" = 2000'



DIRECTIONS TO SITE:
DEPART 496 LONG POINT RD, MT PLEASANT, SC 29464 ON LONG POINT RD (EAST) 3.5 MI. TURN LEFT (NORTH-EAST) ONTO US-17 [US-701] 50.3 MI. KEEP RIGHT ONTO LOCAL ROAD(S) 32 YDS. BEAR LEFT (NORTH) ONTO LOCAL ROAD(S) 54 YDS. BEAR RIGHT (EAST) ONTO US-17 [CHURCH ST] 34.8 MI. TAKE RAMP ONTO US-501 [EDWARD E BURROUGHS HWY] 2.5 MI. KEEP RIGHT ONTO RAMP 0.5 MI. TAKE RAMP ONTO SR-31 [CAROLINA BAYS PKWY] 19.5 MI. TAKE RAMP (RIGHT) ONTO SR-91.8 MI. TURN OFF ONTO RAMP 0.3 MI. TURN LEFT (EAST) ONTO SR-90 0.8 MI. MERGE ONTO US-17 47.5 MI. (ENTERING NORTH CAROLINA) TAKE RAMP (RIGHT) ONTO US-17 [US-74] 2.9 MI. ROAD NAME CHANGES TO US-17 BUS [US-76] 1.5 MI. KEEP STRAIGHT ONTO US-76 [DAWSON ST] 1.2 MI. BEAR RIGHT (SOUTH-EAST) ONTO US-76 [OLEANDER DR] 2.4 MI. TURN RIGHT (SOUTH) ONTO US-117 [SR-132] 0.3 MI. TURN RIGHT (WEST) ONTO LAKE AVE 120 YDS. TURN RIGHT (NORTH) ONTO LOCAL ROAD(S) 32 YDS. ARRIVE AT SITE.

AT&T SITE NUMBER:
478-104



Know what's below.
Call before you dig.

AMERICAN TOWER
CORPORATION

PROPOSED STEALTH UNIPOLE & WIRELESS
TELECOMMUNICATIONS FACILITY

DIG ALERT:

CALL 811 FOR UNDERGROUND UTILITIES PRIOR TO DIGGING OR (800) 632-4949

EMERGENCY:

CALL 911

APPROVAL			
OWNER'S AGENT APPROVAL	SIGNATURE	PHONE NUMBER	DATE
ATC CONSTRUCTION COORDINATOR	SIGNATURE	PHONE NUMBER	DATE
ATC APPROVAL	SIGNATURE	PHONE NUMBER	DATE

SET NO.	DESCRIPTION	BY	DATE	SET NO.	DESCRIPTION	BY	DATE
1	CITY CHANGES	AGT	04-24-14	5			
2	CITY COMMENTS	DS	06-24-14	6			
3	CITY CHANGES	DS	06-26-14	7			
4				8			

ARCHITECTURAL AND ENGINEERING FIRM:

BC ARCHITECTS ENGINEERS, PLC
5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000 CONTACT: CHRIS MORIN
FAX: (703) 671-6300

SURVEYOR:

RONALD D. PLATNER
1 WEX FERRY COURT
LEXINGTON, SC 29702
TEL: (803) 315-1238 CONTACT: RONALD D. PLATNER
FAX: -

SOIL ENGINEER:

NOT APPLICABLE

STRUCTURAL ENGINEER:

BC ARCHITECTS ENGINEERS, PLC
5661 COLUMBIA PIKE, SUITE 101
FALLS CHURCH, VA 22041-2868

TEL: (703) 671-6000 CONTACT: CHRIS MORIN
FAX: (703) 671-6300

UTILITIES:

POWER COMPANY:

COMPANY NAME: PROGRESS ENERGY
CONTACT: CUSTOMER SERVICE
TEL: (800) 452-2777
FAX: -

TELEPHONE COMPANY:

COMPANY NAME: AT&T
CONTACT: CUSTOMER SERVICE
TEL: (800) 222-0300
FAX: -

CONSULTING TEAM

SITE NAME:

MAC RAE PARK NC

SITE NUMBER:

275164

SITE ADDRESS:

4417 LAKE AVE.
WILMINGTON, NC 28409

APPLICANT BUILDING INFO:

AMERICAN TOWER CORP.
496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464

TEL: (843) 971-8385

FAX: (843) 971-8889

PROJECT DESCRIPTION:

AN UNMANNED RADIO TELECOMMUNICATIONS FACILITY
CONSISTING OF A 150 FT. STEALTH UNIPOLE IN
A 10'x10' LEASE AREA

ADA COMPLIANCE:

FACILITY IS UNMANNED AND NOT
FOR HUMAN HABITATION

PROJECT DATA:

CAMA LAND USE CLASS: URBAN
TAX PARCEL NO: R06107-012-001-000
JURISDICTION: CITY OF WILMINGTON
LEASE AREA: 10'x10' (100 S.F.)
ZONING: O&I-1

GEOGRAPHIC COORDINATES:

LATITUDE: 34° 12' 25.054" N
LONGITUDE: 77° 53' 18.487" W
1A GROUND ELEVATION: 40.9' AMSL

CODE COMPLIANCE:

2012 NCBC
2009 IBC W/ NC AMENDMENTS

PROJECT SUMMARY

PROPERTY OWNER:

AT&T CLEC BUILDING
1642 S COLLEGE RD
WILMINGTON, NC 28409

CONTACT: -

TEL: -

ATC - AGENT

THOMAS JOHNSON
NEXSEN PRUET PLLC
4141 PARK LAKE AVE. STE. 200
RALEIGH, NC 27612
TEL: (919) 786-2764

CONTACT: JASON GROSECLOSE

TEL: (843) 224-3778

SHEET NUMBER: DESCRIPTION:

T-1 TITLE SHEET, VICINITY MAP AND
GENERAL INFORMATION

C1 TO C3 SURVEY

NP-1 SITE PLAN WITH NEIGHBORING PROPERTY INFORMATION

A-0 SITE PLAN
A-1 ENLARGED SITE PLAN
A-2 TOWER ELEVATION
A-3 FENCE, GATE AND COMPOUND CROSS SECTION
A-4 SHELTER LAYOUT & ELEVATIONS
A-5 SHELTER DETAILS
A-6 ICEBRIDGE DETAILS
A-7 ANTENNA DETAILS
A-8 WOOD FENCE DETAILS

G-1 EROSION & SEDIMENT CONTROL PLAN
G-2 SILT FENCE DETAILS & NOTES

L-1 TREE REMOVAL & LANDSCAPE PLAN
L-2 LANDSCAPING NOTES & PROTECTION DETAILS

E-1 UTILITY & GROUNDING PLAN
E-2 ENLARGED GROUNDING PLAN
E-3 AT&T ELECTRICAL DETAILS
E-4 AT&T PANELBOARD SCHEDULE
E-5 AT&T ELECTRICAL DETAILS
E-6 AT&T ELECTRICAL DETAILS
E-7 AT&T ELECTRICAL DETAILS
E-8 AT&T ELECTRICAL DETAILS
E-9 ELECTRICAL DETAILS
E-10 ELECTRICAL DETAILS
E-11 ELECTRICAL NOTES

GEN-1 50KW GENERATOR DETAILS
GEN-2 50KW GENERATOR DETAILS
GEN-3 50KW GENERATOR DETAILS
GEN-4 50KW GENERATOR DETAILS

SP-1 SPECIFICATIONS
SP-2 SPECIFICATIONS

SHEET INDEX

ISSUED FOR CONSTRUCTION



THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER CORPORATION AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. REUSE, REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM AMERICAN TOWER CORPORATION TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH AMERICAN TOWER CORPORATION WITHOUT PREJUDICE AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.



architects
engineers

5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300

SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1	NEW SHEETS	AGT	04-24-14
2	CITY COMMENTS	DS	06-24-14
3	NEW SHEET	DS	06-26-14
4			
5			
6			

ATC SITE NUMBER:

275164

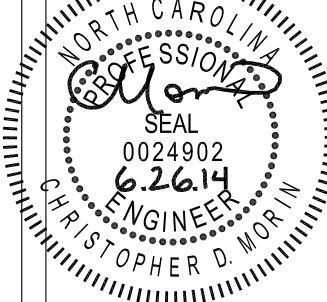
ATC SITE NAME:

MAC RAE PARK
NC

SITE ADDRESS:

4417 LAKE AVE.
WILMINGTON, NC 28409

STAMP HERE:



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

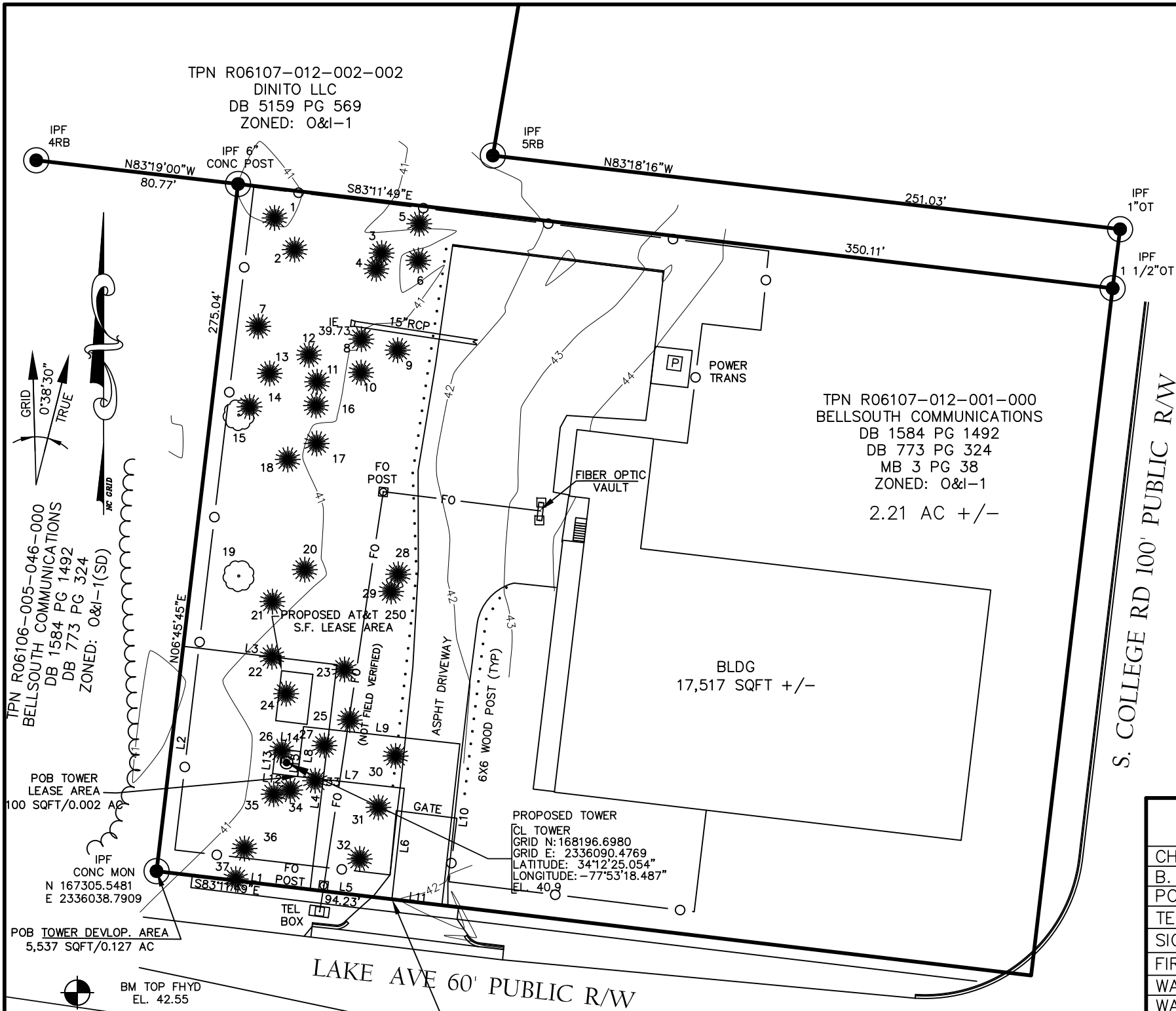
SHEET TITLE:

TITLE SHEET,
VICINITY MAP
AND GENERAL
INFORMATION

SHEET NUMBER: REV. #

T-1

2



IPN R06106-005-046-000
BELLSOUTH COMMUNICATIONS
DB 1584 PG 1492
MB 773 PG 324
ZONED: O&I-1(SD)

POB TOWER LEASE AREA
100 SQFT/0.002 AC

POB TOWER DEVELOP. AREA
5,537 SQFT/0.127 AC

LINE TABLE		
LINE	BEARING	LENGTH
L1	N83°11'49"W	61.50
L2	N06°45'45"E	90.00
L3	N83°11'49"W	61.50
L4	S06°45'45"W	90.00
L5	S83°11'49"E	32.73
L6	N06°20'06"E	44.32
L7	N83°39'54"W	42.65
L8	N06°45'45"E	20.00
L9	S83°39'54"E	62.50
L10	S06°20'06"W	64.49
L11	N83°11'49"W	20.00

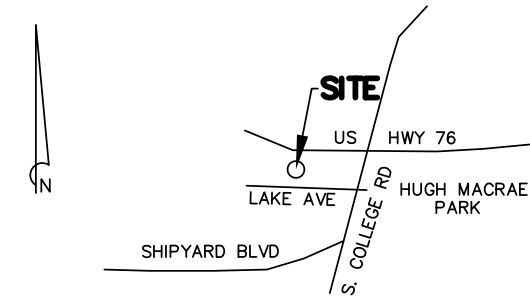
LINE TABLE		
L12	N83°15'37"W	10.00
L13	N06°45'45"E	10.00
L14	S83°15'37"E	10.00
L15	S06°45'45"W	10.00

SYMBOL	DESCRIPTION
	PALMETTO
	PINE
	LIVE OAK
	TWIN OAK
	MULTI-TRUNK OAK

- | | |
|------------------|--------------|
| 1. 20" PINE | 19. 34" OAK |
| 2. 18" PINE | 20. 22" PINE |
| 3. 15" PINE | 21. 20" PINE |
| 4. 14" PINE | 22. 22" PINE |
| 5. 14" PINE | 23. 20" PINE |
| 6. 12" PINE | 24. 24" PINE |
| 7. 14" PINE | 25. 20" PINE |
| 8. 12" PINE | 26. 18" PINE |
| 9. 16" PINE | 27. 15" PINE |
| 10. 20" PINE | 28. 16" PINE |
| 11. 20" PINE | 29. 20" PINE |
| 12. 12" PINE | 30. 18" PINE |
| 13. 20" PINE | 31. 19" PINE |
| 14. 15" PINE | 32. 24" PINE |
| 15. 14" LIVE OAK | 33. 16" PINE |
| 16. 10" PINE | 34. 23" PINE |
| 17. 18" PINE | 35. 18" PINE |
| 18. 12" PINE | 36. 20" PINE |
| | 37. 21" PINE |

SET BACKS:
FRONT: 25'
REAR: 20'
SIDE: 10'

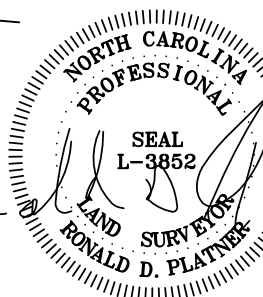
REFERENCE:
1. REF PLAT MB 3 PG 38



SITE MAP
N.T.S.

LEGEND			
CH. LNK. FENCE	-o-o-	GROUND ROD	+
B. WIRE FENCE	-x-	PROP. CORNER	⊙
POWER LINE	-p-	POWER POLE	⊕
TELE. LINE	-t-	PP W/ G. WIRE	⊕
SIGN	-s-	LIGHT POLE	⊕
FIRE HYDRANT	⊕	BM OR GPS PT	⊕
WATER VALVE	⊕	ELEC. RACK	⊕
WATER METER	⊕	ICE BRIDGE	⊕
TELE. BOX	⊕	CONC. PAD	⊕
S.S. MH	⊕	EQUIP. PAD	⊕
STORM MH	⊕	POWER BOX	⊕

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE CALCULATED BOUNDARY LINES OF THE LEASE SITE AND EASEMENT SHOWN HEREIN ARE EQUIVALENT TO THE CLASS "B" ACCURACY REQUIREMENTS AS SPECIFIED IN THE "MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN NORTH CAROLINA."



REVISIONS

NO.	DATE	DESCRIPTION	BY
1	11/13/13	MOVE LEASE AREA/ADD TREES	BB
2	12/16/13	REVISE PER COMMENTS	BB
3	2/14/14	ADDED TITLE	RDP

NOTES:

- THIS EXHIBIT REPRESENTS THE LEASE SITE AND ACCESS, UTILITY AND MAINTENANCE EASEMENTS ONLY AND IS NOT INTENDED FOR ANY OTHER USE.
- ALL BEARINGS ARE NORTH CAROLINA STATE GRID, ALL COORDINATES ARE NAD 83 AND ALL ELEVATIONS ARE NAVD 88.
- TAX MAP PARCEL NO. R06107-012-001-000
- RATIO OF PRECISION = 1/10,000.
- AREA BY COORDINATE METHOD.
- THE LOCATIONS OF ANY UNDERGROUND UTILITIES IF SHOWN ARE BASED ON PAINTED MARKINGS OBSERVED IN THE FIELD AND/OR ARE APPROXIMATE.
- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS OR RIGHTS-OF-WAY NOT SHOWN HEREIN.

NOTE:

THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY BY RONALD D. PLATNER PROPERTY LINES WERE TAKEN FROM EXISTING FIELD EVIDENCE. EXISTING DEEDS AND PLATS OF PUBLIC RECORD FROM SURVEYS AND DOCUMENTS PROVIDED TO THE SURVEYOR BY THE OWNER OR CLIENT.

I HEREBY CERTIFY THAT I HAVE CONSULTED THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP NO. 3720313600J DATED 4/03/06: AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THE SUBJECT PROPERTY IS LOCATED IN "ZONE X" WHICH IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE A OR V.

LEASE SITE AND ACCESS, UTILITY, & MAINTENANCE EASEMENT EXHIBIT

PREPARED FOR

AMERICAN TOWER

SITE INFORMATION:

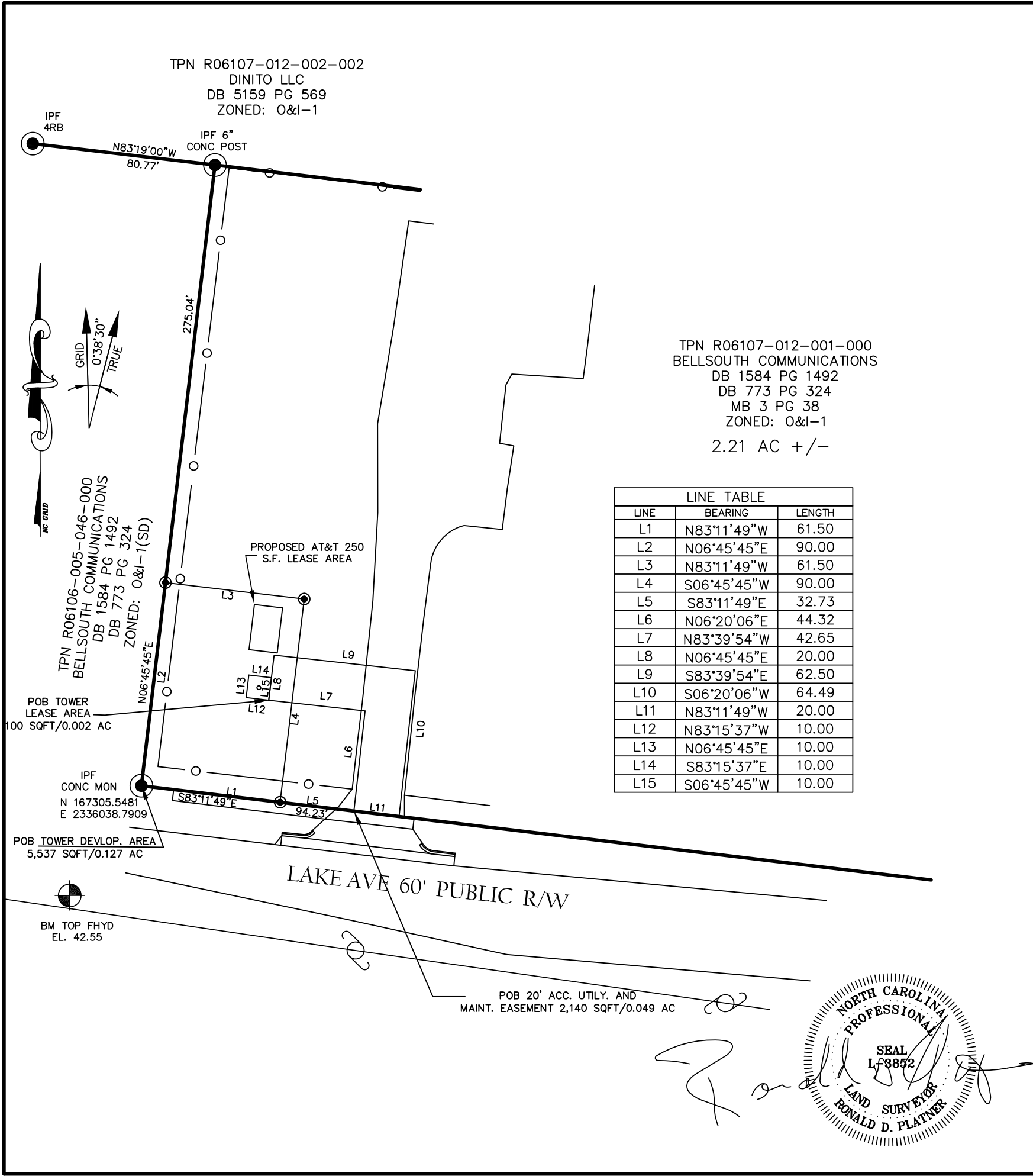
MACRAE PARK NC
TOWER SITE
SITE ID#: 275164
1642 S. COLLEGE RD
WILMINGTON, NEW HANOVER COUNTY, NC

RONALD D. PLATNER, PLS

1 WISE FERRY COURT
LEXINGTON, S. C. 29702
TELE. (803) 315-1238

SCALE: 0' 25' 50' 100'
1" = 50'

DRAWING NAME RIVER RD.DWG	DATE SEPT. 17, 2013	SHEET NO. C1
PROJECT NO. RIVER RD	FIELD BOOK NO. (SEE FILE)	



REVISIONS

1	11/13/13	MOVE LEASE AREA/ADD TREES	BB
2	12/16/13	REVISE PER COMMENTS	BB
3	2/14/14	ADDED TITLE	RDP
NO.	DATE	DESCRIPTION	BY

NOTES:
1) THIS EXHIBIT REPRESENTS THE LEASE SITE AND ACCESS, UTILITY AND MAINTENANCE EASEMENTS ONLY AND IS NOT INTENDED FOR ANY OTHER USE.
2) ALL BEARINGS ARE NORTH CAROLINA STATE GRID, ALL COORDINATES ARE NAD 83 AND ALL ELEVATIONS ARE NAVD 88.
3) TAX MAP PARCEL NO. R06107-012-001-000
4) RATIO OF PRECISION = 1/10,000.
5) AREA BY COORDINATE METHOD.
6) THE LOCATIONS OF ANY UNDERGROUND UTILITIES IF SHOWN ARE BASED ON PAINTED MARKINGS OBSERVED IN THE FIELD AND/OR ARE APPROXIMATE.
7) THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS OR RIGHTS-OF-WAY NOT SHOWN HEREIN.

REFERENCE:
1. REF PLAT MB 3 PG 38

SITE MAP
N.T.S.

NOTE:
THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY BY RONALD D. PLATNER PROPERTY LINES WERE TAKEN FROM EXISTING FIELD EVIDENCE. EXISTING DEEDS AND PLATS OF PUBLIC RECORD FROM SURVEYS AND DOCUMENTS PROVIDED TO THE SURVEYOR BY THE OWNER OR CLIENT.

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LEASE SITE AND ACCESS, UTILITY, & MAINTENANCE EASEMENT EXHIBIT

PREPARED FOR

AMERICAN TOWER

SITE INFORMATION:
MACRAE PARK NC
TOWER SITE
SITE ID#: 275164
1642 S. COLLEGE RD
WILMINGTON, NEW HANOVER COUNTY, NC

RONALD D. PLATNER, PLS
1 WISE FERRY COURT
LEXINGTON, S. C. 29702
TELE. (803) 315-1238

SCALE: 0' 25' 50' 100'
1" = 50'

DRAWING NAME RIVER RD.DWG	DATE SEPT. 17, 2013	SHEET NO. C2
PROJECT NO. RIVER RD	FIELD BOOK NO. (SEE FILE)	

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE CALCULATED BOUNDARY LINES OF THE LEASE SITE AND EASEMENT SHOWN HEREIN ARE EQUIVALENT TO THE CLASS "B" ACCURACY REQUIREMENTS AS SPECIFIED IN THE "MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN NORTH CAROLINA."

RONALD D. PLATNER, P.L.S. NO. L-3852

20’ ACCESS, UTILITY, AND MAINTENANCE EASEMENT

BEGINNING AT A CONCRETE MONUMENT AT THE SOUTHWESTERN MOST CORNER OF TAX PARCEL NUMBER R06107-012-001-000 AND THE RIGHT OF WAY OF LAKE AVENUE WITH STATE PLANE COORDINATES N167305.5481 E2336038.7909, THENCE S83°11’49”E FOR A DISTANCE OF 94.23 ALONG THE RIGHT OF WAY OF LAKE AVENUE TO A POINT, SAID POINT BEING THE POINT OF BEGINNING FOR THE ACCESS, UTILITY, AND MAINTENANCE EASEMENT, THENCE N06°20’06”E FOR A DISTANCE OF 44.32 TO A POINT, THENCE N83°39’54”W FOR A DISTANCE OF 42.65 TO A POINT, THENCE N06°45’45”E FOR A DISTANCE OF 20.00 TO A POINT, THENCE S83°39’54”E FOR A DISTANCE OF 62.50 TO A POINT, THENCE S06°20’06”W FOR A DISTANCE OF 64.49 TO A POINT, THENCE N83°11’49”W FOR A DISTANCE OF 20.00 TO A POINT, SAID POINT BEING THE POINT OF BEGINNING FOR THE ACCESS, UTILITY, AND MAINTENANCE EASEMENT CONTAINING 2,140 SQFT/0.049 AC.

TOWER DEVELOPMENT AREA

BEGINNING AT A CONCRETE MONUMENT AT THE SOUTHWESTERN MOST CORNER OF TAX PARCEL NUMBER R06107-012-001-000 AND THE RIGHT OF WAY OF LAKE AVENUE WITH STATE PLANE COORDINATES N167305.5481 E2336038.7909, SAID POINT BEING THE POINT OF BEGINNING FOR THE TOWER DEVELOPMENT AREA, THENCE N06°45’45”E FOR A DISTANCE OF 90.00 TO A POINT, THENCE S83°11’49”E FOR A DISTANCE OF 61.50 TO A POINT, THENCE S06°45’45”W FOR A DISTANCE OF 90.00 TO A POINT, THENCE N83°11’49”W FOR A DISTANCE OF 61.50 TO A POINT, SAID POINT BEING THE POINT OF BEGINNING FOR THE TOWER DEVELOPMENT AREA CONTAINING 5,537 SQFT/0.127 AC.

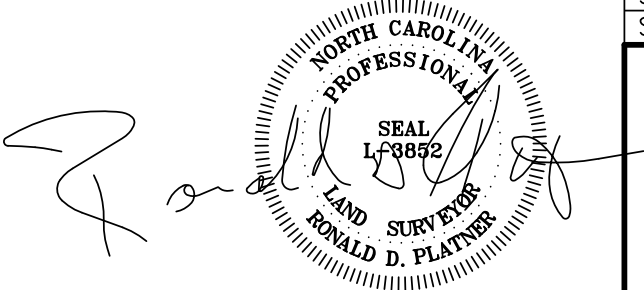
TOWER LEASE AREA

BEGINNING AT A CONCRETE MONUMENT AT THE SOUTHWESTERN MOST CORNER OF TAX PARCEL NUMBER R06107-012-001-000 AND THE RIGHT OF WAY OF LAKE AVENUE WITH STATE PLANE COORDINATES N167305.5481 E2336038.7909, THENCE S83°11’49”E FOR A DISTANCE OF 94.23 ALONG THE RIGHT OF WAY OF LAKE AVENUE TO A POINT, THENCE N06°20’06”E FOR A DISTANCE OF 44.32 TO A POINT, THENCE N83°39’54”W FOR A DISTANCE OF 42.65 TO A POINT, SAID POINT BEING THE POINT OF BEGINNING FOR THE TOWER LEASE AREA, THENCE N83°15’37”W FOR A DISTANCE OF 10.00 TO A POINT, THENCE N06°45’45”E FOR A DISTANCE OF 10.00 TO A POINT, THENCE S83°15’37”E FOR A DISTANCE OF 10.00 TO A POINT, THENCE S06°45’45”W FOR A DISTANCE OF 10.00 TO A POINT, SAID POINT BEING THE POINT OF BEGINNING FOR THE TOWER LEASE AREA CONTAINING 100 SQFT/0.002 AC.

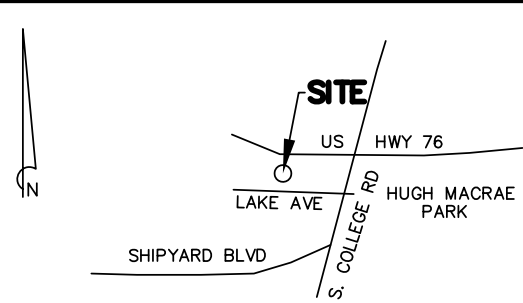
SCHEDULE A
Commitment 01-14004827-01T
1. Commitment Effective Date: 01/15/2014 at 7:00 AM

EXHIBIT "A"
SITUATED IN THE COUNTY OF NEW HANOVER AND STATE OF NORTH CAROLINA AND DESCRIBED AS FOLLOWS:
PARENT PARCEL:
BEGINNING AT A POINT IN THE WESTERN RIGHT OF WAY LINE OF N.C. HIGHWAY #132 WHERE SAID WESTERN RIGHT OF WAY LINE IS INTERSECTED BY AN EXTENSION OF THE NORTHERLY LINE OF LAKE AVENUE AS SAID LAKE AVENUE IS SHOWN ON A MAP OF WINTER PARK GARDENS RECORDED IN MAP BOOK 3, PAGE 38, OF THE NEW HANOVER COUNTY REGISTRY; RUNNING THENCE IN A WESTERLY DIRECTION AND WITH AND ALONG SAID EXTENDED LINE OF LAKE AVENUE 350 FEET TO A POINT; THENCE IN A NORTHERLY DIRECTION AND PARALLEL WITH THE WESTERLY RIGHT OF WAY OF N.C. HIGHWAY 132, 275 FEET TO A POINT; THENCE EASTWARDLY AND PARALLEL WITH EXTENDED NORTHERLY LINE OF LAKE AVENUE 350 FEET TO A POINT IN THE WESTERN RIGHT OF WAY LINE OF N.C. HIGHWAY 132; THENCE SOUTHWARDLY WITH AND ALONG SAID WESTERN RIGHT AWAY LINE OF N.C. HIGHWAY 132, 275 FEET TO THE POINT OF BEGINNING.
TAX I.D. NUMBER: R06107-012-001-000
END OF SCHEDULE A

SCHEDULE B - SECTION II
EXCEPTIONS
ANY POLICY WE ISSUE WILL HAVE THE FOLLOWING EXCEPTIONS UNLESS THEY ARE TAKEN CARE OF TO OUR SATISFACTION.
(1) FACTS WHICH WOULD BE DISCLOSED BY A COMPREHENSIVE SURVEY OF THE PREMISES HEREIN DESCRIBED. AS SHOWN ON SURVEY
(2) RIGHTS OR CLAIMS OF PARTIES IN POSSESSION OR RIGHTS OF TENANTS IN POSSESSION AS TENANTS ONLY UNDER UNRECORDED LEASES. AS SHOWN ON SURVEY
(3) MECHANICS', CONTRACTORS' OR MATERIAL MEN'S LIENS AND LIEN CLAIMS, IF ANY, WHERE NO NOTICE THEREOF APPEARS OF RECORD. NOT A SURVEY ISSUE
(4) ANY CHANGES IN TITLE OCCURRING SUBSEQUENT TO THE EFFECTIVE DATE OF THIS COMMITMENT AND PRIOR TO THE DATE OF ISSUANCE OF THE TITLE POLICY. NOT A SURVEY ISSUE
(5) TAXES AND SPECIAL ASSESSMENTS FOR CURRENT TAX YEAR DUE AND ALL SUBSEQUENT YEARS. NOT A SURVEY ISSUE
(6) SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, AND RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT RECORDED IN BOOK 3, PAGE 38 OF NE W HANOVER COUNTY RECORDS. AS SHOWN ON SURVEY
END OF SCHEDULE B-II



REFERENCE:
1.REF PLAT MB 3 PG 38



SITE MAP
N.T.S.

LEGEND			
CH. LNK. FENCE	—o—	GROUND ROD	+
B. WIRE FENCE	—x—	PROP. CORNER	⊙
POWER LINE	—P—	POWER POLE	⌘
TELE. LINE	—T—	PP W/ G. WIRE	⌘
SIGN	—	LIGHT POLE	⊙
FIRE HYDRANT	⊗	BM OR GPS PT	⊕
WATER VALVE	⊕	ELEC. RACK	⌘
WATER METER	⊖	ICE BRIDGE	⌘
TELE. BOX	⊠	CONC. PAD	⌘
S.S. MH	⊙	EQUIP. PAD	⌘
STORM MH	⊙	POWER BOX	⌘

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE CALCULATED BOUNDARY LINES OF THE LEASE SITE AND EASEMENT SHOWN HEREIN ARE EQUIVALENT TO THE CLASS "B" ACCURACY REQUIREMENTS AS SPECIFIED IN THE "MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN NORTH CAROLINA."

RONALD D. PLATNER, P.L.S. NO. L-3852

REVISIONS

1	11/13/13	MOVE LEASE AREA/ADD TREES	BB
2	12/16/13	REVISE PER COMMENTS	BB
3	2/14/14	ADDED TITLE	RDP
NO.	DATE	DESCRIPTION	BY

NOTES:
1) THIS EXHIBIT REPRESENTS THE LEASE SITE AND ACCESS, UTILITY AND MAINTENANCE EASEMENTS ONLY AND IS NOT INTENDED FOR ANY OTHER USE.
2) ALL BEARINGS ARE NORTH CAROLINA STATE GRID, ALL COORDINATES ARE NAD 83 AND ALL ELEVATIONS ARE NAVD 88.
3) TAX MAP PARCEL NO. R06107-012-001-000
4) RATIO OF PRECISION = 1/10,000.
5) AREA BY COORDINATE METHOD.
6) THE LOCATIONS OF ANY UNDERGROUND UTILITIES IF SHOWN ARE BASED ON PAINTED MARKINGS OBSERVED IN THE FIELD AND/OR ARE APPROXIMATE.
7) THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS OR RIGHTS-OF-WAY NOT SHOWN HEREIN.

NOTE:
THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY BY RONALD D. PLATNER PROPERTY LINES WERE TAKEN FROM EXISTING FIELD EVIDENCE. EXISTING DEEDS AND PLATS OF PUBLIC RECORD FROM SURVEYS AND DOCUMENTS PROVIDED TO THE SURVEYOR BY THE OWNER OR CLIENT.

I HEREBY CERTIFY THAT I HAVE CONSULTED THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP NO. 3720313600J DATED 4/03/06: AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THE SUBJECT PROPERTY IS LOCATED IN "ZONE X" WHICH IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE A OR V.

LEASE SITE AND ACCESS, UTILITY, &
MAINTENANCE EASEMENT EXHIBIT
PREPARED FOR

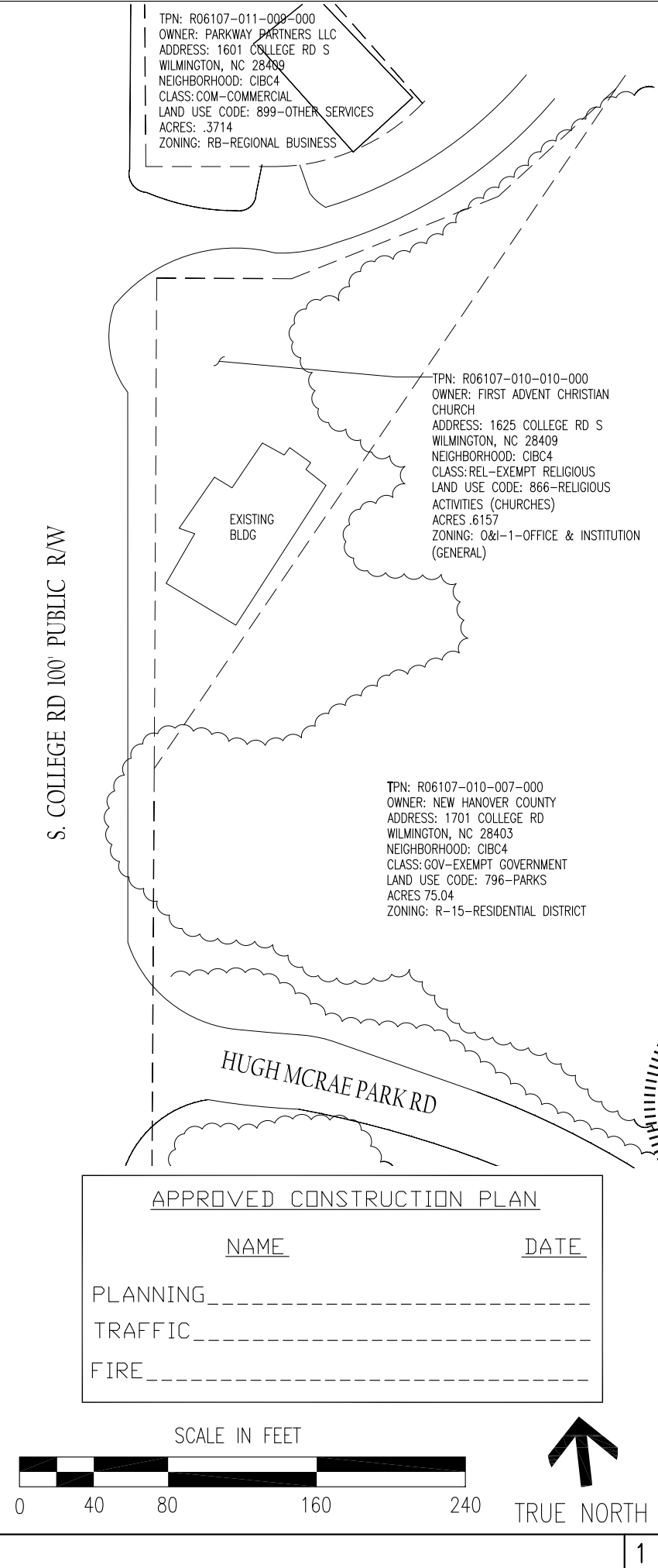
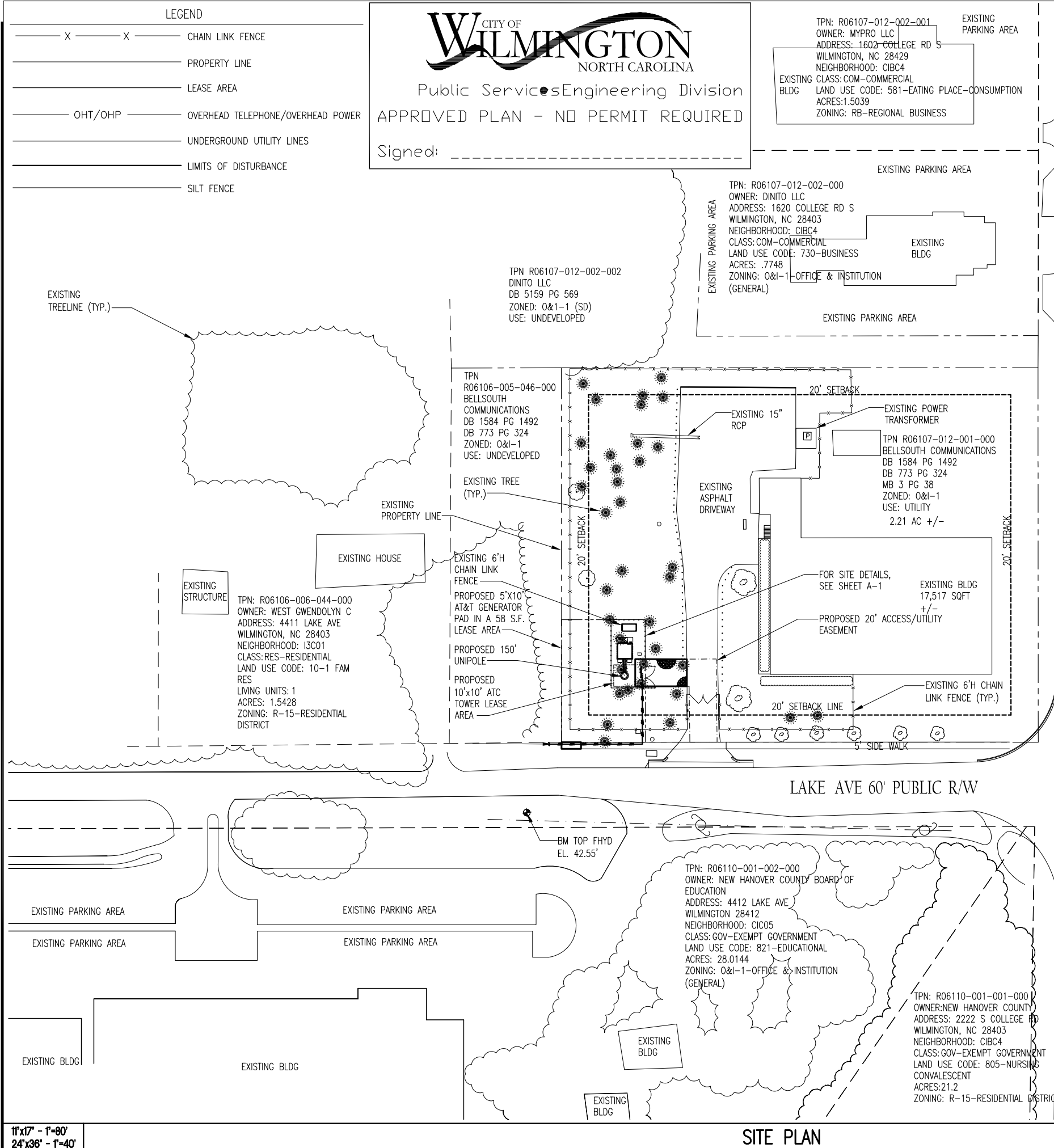
AMERICAN TOWER


SITE INFORMATION:
MACRAE PARK NC
TOWER SITE
SITE ID#: 275164
1642 S. COLLEGE RD
WILMINGTON, NEW HANOVER COUNTY, NC

RONALD D. PLATNER, PLS
1 WISE FERRY COURT
LEXINGTON, S. C. 29702
TELE. (803) 315-1238

SCALE: 0' 25' 50' 100'
1" = 50'

DRAWING NAME RIVER RD.DWG	DATE SEPT. 17, 2013	SHEET NO. C3
PROJECT NO. RIVER RD	FIELD BOOK NO. (SEE FILE)	

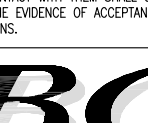




AMERICAN TOWER[®]
CORPORATION

496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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BC
architects
engineers

5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300


SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
①	NEW SHEET	AGT	06-26-14
②	_____	_____	_____
③	_____	_____	_____
④	_____	_____	_____
⑤	_____	_____	_____
⑥	_____	_____	_____

ATC SITE NUMBER:
275164

ATC SITE NAME:
**MAC RAE PARK
NC**

SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**

STAMP HERE:

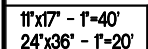


DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

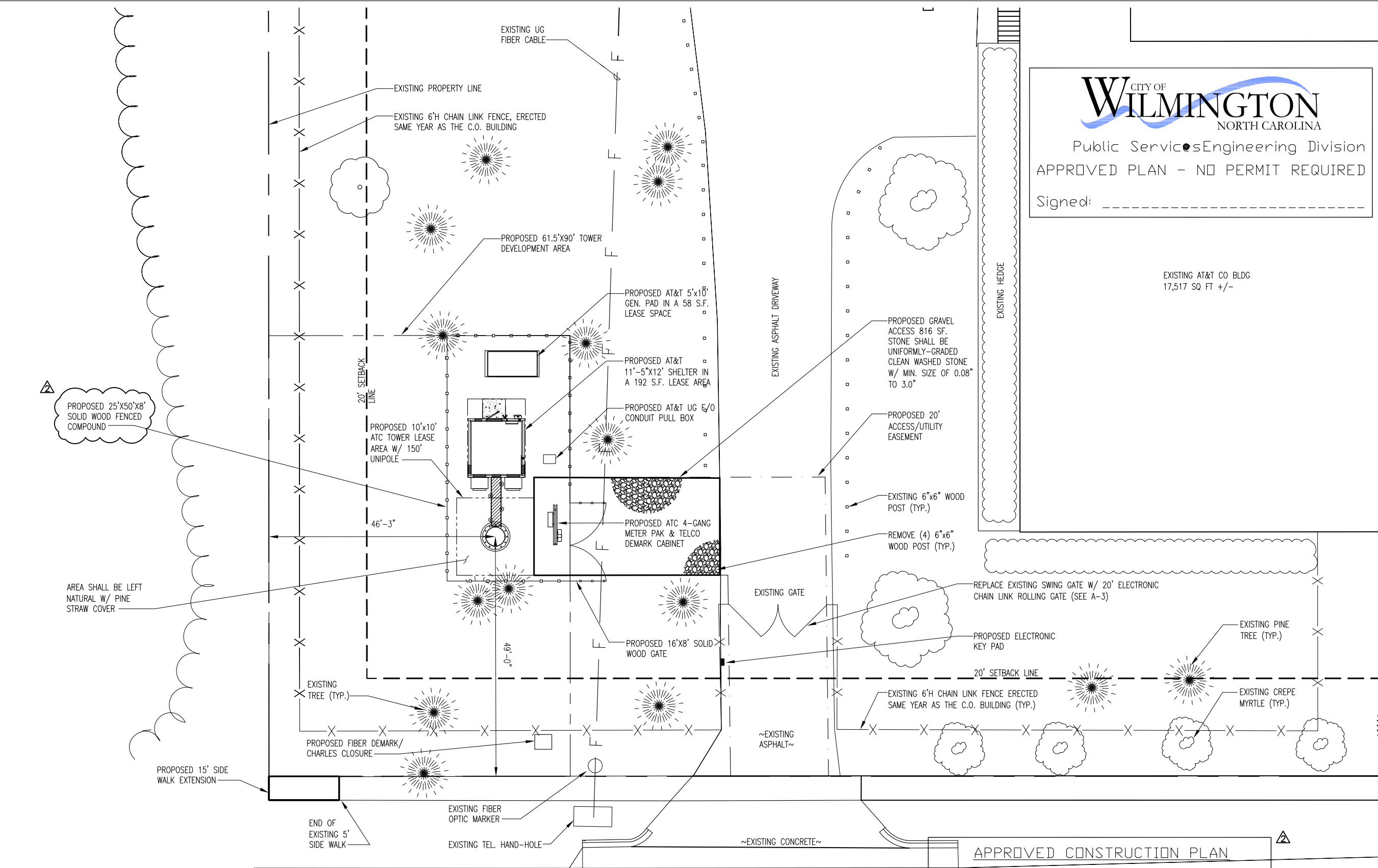
**SITE PLAN WITH
NEIGHBORING PROP.
INFORMATION**

SHEET NUMBER:	REV. #
NP-1	1



Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's Rev 1 2014-04-24/A1.dwg

04-24-14 ARNOLD 16:42:13



1"=17' - 1"=20'
24"=36' - 1"=10'

ENLARGED SITE PLAN

CITY OF
WILMINGTON
NORTH CAROLINA

Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

EXISTING AT&T CO BLDG
17,517 SQ FT +/-

EXISTING HEDGE

EXISTING ASPHALT DRIVEWAY

PROPOSED GRAVEL
ACCESS 816 SF.
STONE SHALL BE
UNIFORMLY-GRADED
CLEAN WASHED STONE
W/ MIN. SIZE OF 0.08"
TO 3.0"

PROPOSED 20'
ACCESS/UTILITY
EASEMENT

EXISTING 6"x6" WOOD
POST (TYP.)

REMOVE (4) 6"x6"
WOOD POST (TYP.)

EXISTING GATE

REPLACE EXISTING SWING GATE W/ 20' ELECTRONIC
CHAIN LINK ROLLING GATE (SEE A-3)

PROPOSED ELECTRONIC
KEY PAD

EXISTING PINE
TREE (TYP.)

EXISTING CREPE
MYRTLE (TYP.)

EXISTING 6'H CHAIN LINK FENCE ERECTED
SAME YEAR AS THE C.O. BUILDING (TYP.)

PROPOSED 16'x8' SOLID
WOOD GATE

EXISTING
TREE (TYP.)

PROPOSED FIBER DEMARK/
CHARLES CLOSURE

PROPOSED 15' SIDE
WALK EXTENSION

END OF
EXISTING 5'
SIDE WALK

EXISTING FIBER
OPTIC MARKER

EXISTING TEL. HAND-HOLE

~EXISTING CONCRETE~

APPROVED CONSTRUCTION PLAN

NAME _____

DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____



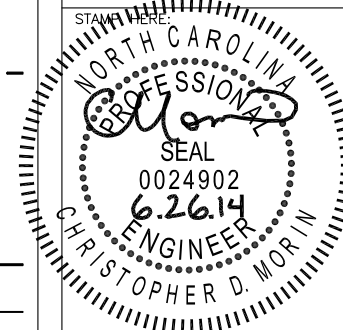
AMERICAN TOWER
CORPORATION
496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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SPECIFICATIONS SHALL REMAIN WITH AMERICAN
TOWER CORPORATION WITHOUT PREJUDICE AND
VISUAL CONTACT WITH THEM SHALL CONSTITUTE
PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE
RESTRICTIONS.

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engineers
5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300

SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1	CLIENT CHGS.	AGT	01-10-14
2	CITY COMMENTS	DS	06-24-14
3			
4			
5			
6			

ATC SITE NUMBER:
275164
ATC SITE NAME:
**MAC RAE PARK
NC**
SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**ENLARGED
SITE PLAN**

SHEET NUMBER: **A-1** REV. # **2**

02-11-14 VICTOR GARCIA 10:31:48 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/A2.dwg

NOTES:

G.C. SHALL TEST AND DOCUMENT THAT THE TOWER LIGHTING SYSTEMS ARE FUNCTIONING PROPERLY DURING & UPON COMPLETION OF EQUIPMENT INSTALLATION.

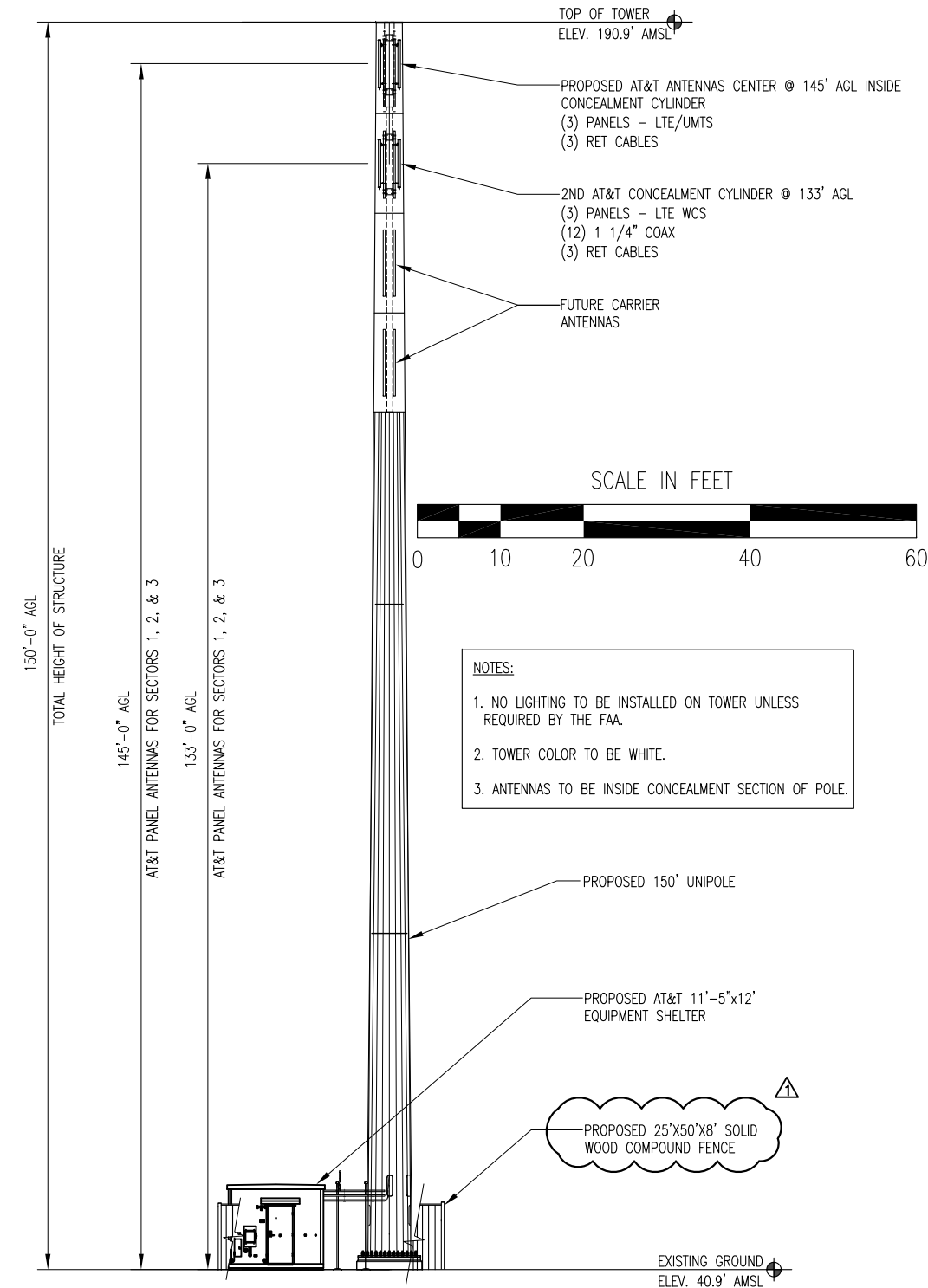
G.C. WILL PERFORM TWO HEIGHT VERIFICATIONS ON AT&T PROVIDED FORMS AS FOLLOWS:

TAPE DROP #1 SHALL BE SUBMITTED TO THE APPROPRIATE AT&T TOWER CONSTRUCTION MANAGER WITHIN (24) HOURS UPON COMPLETION OF THE TOWER ERECTION AND WILL DOCUMENT THE DIMENSION FROM THE GROUND TO HIGHEST POINT ON THE TOWER (I.E.: LIGHTNING ROD).

TAPE DROP #2 SHALL BE PERFORMED AND SUBMITTED TO THE APPROPRIATE AT&T CONSTRUCTION MANAGER WITHIN (72) HOURS UPON COMPLETION OF THE ANTENNA AND LINE INSTALLATION. THIS FORM WILL ACCOMPANY THE SWEEP TEST REPORTS AND WILL DOCUMENT THE DIMENSION FROM THE GROUND TO THE TOP OF AT&T'S ANTENNAS.

IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INVENTORY THE TOWER MATERIALS UPON DELIVERY TO THE SITE. A BILL OF MATERIAL, (PACKING LIST(S) WILL BE INCLUDED WITH THE SHIPMENT. IF THIS LIST OR LISTS ARE NOT INCLUDED, PLEASE NOTIFY THE AT&T PROJECT MANAGER IMMEDIATELY. FAILURE TO REPORT MATERIAL SHORTAGES OR DAMAGED GOODS WITHIN 48 HOURS OF RECEIPT WILL INDICATE THE G.C. HAS ACCEPTED ALL MATERIAL IN GOOD CONDITION AND ALL IS ACCOUNTED FOR.

ANY MATERIAL SHORTAGES OR DAMAGES REPORTED AFTER 48 HOURS WILL AT THAT POINT BE THE RESPONSIBILITY OF THE G.C. TO HAVE CORRECTED BY THE TOWER VENDOR AT HIS/HER EXPENSE.



1"=20'

TOWER ELEVATION

1 N.T.S.

WHITE TEXT GREEN BACKGROUND

INFORMATION

WHITE BACKGROUND

Federal Communications Commission Tower Registration Number

1 2 3 4 5 6 7

BLACK TEXT

Posted in accordance with Federal Communications Commission rules on antenna tower registration 47CFR 17.4 (g)

FCC REGISTRATION SIGN

WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
MOUNTING LOCATION: GATE & BASE OF TOWER
QUANTITY: 2

WHITE TEXT BLUE BACKGROUND

NOTICE

WHITE BACKGROUND

AUTHORIZED PERSONNEL ONLY

BLACK TEXT

QTY: (4) EACH SIDE OF COMPOUND



SITE NAME: _____
SITE NUMBER: _____
FCC REGISTRATION NUMBER: _____

FOR LEASING INFORMATION: 877-282-7483
877-ATC-SITE

IN CASE OF EMERGENCY: 877-518-6937
877-51-TOWER

NO TRESPASSING

www.americantower.com
POSTING OF THIS SIGN REQUIRED BY LAW

OWNER CONTACT SIGN

WHITE BACKGROUND, BLACK/RED LETTERING
MOUNTING LOCATION: GATE
QUANTITY: 1

CITY OF WILMINGTON NORTH CAROLINA

Public Services Engineering Division

APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____

WHITE TEXT RED BACKGROUND BLACK BACKGROUND

DANGER

HIGH VOLTAGE WITHIN KEEP OUT

WHITE BACKGROUND BLACK TEXT

QTY: (1) MAIN COMPOUND GATE

WHITE BACKGROUND GREEN BACKGROUND

Property of

Authorized Personnel Only

In case of emergency, or prior to performing maintenance on this site, call (800) 298-3551 and reference cell site number 478-104

AT&T DOOR SIGN

1. SIGN CAN BE OBTAINED FROM ST. CLAIR SIGNS, INC.
3184 WADE HAMPTON BLVD. TAYLORS, SC 29687
(864) 244-0044



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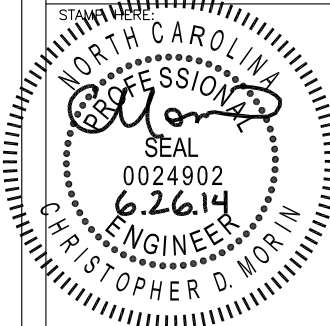
5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300

SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1	QTY CHGS.	DS	06-24-14
2			
3			
4			
5			
6			

ATC SITE NUMBER:
275164

ATC SITE NAME:
MAC RAE PARK NC

SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**TOWER ELEVATION
& SIGNAGE
SPECIFICATIONS**

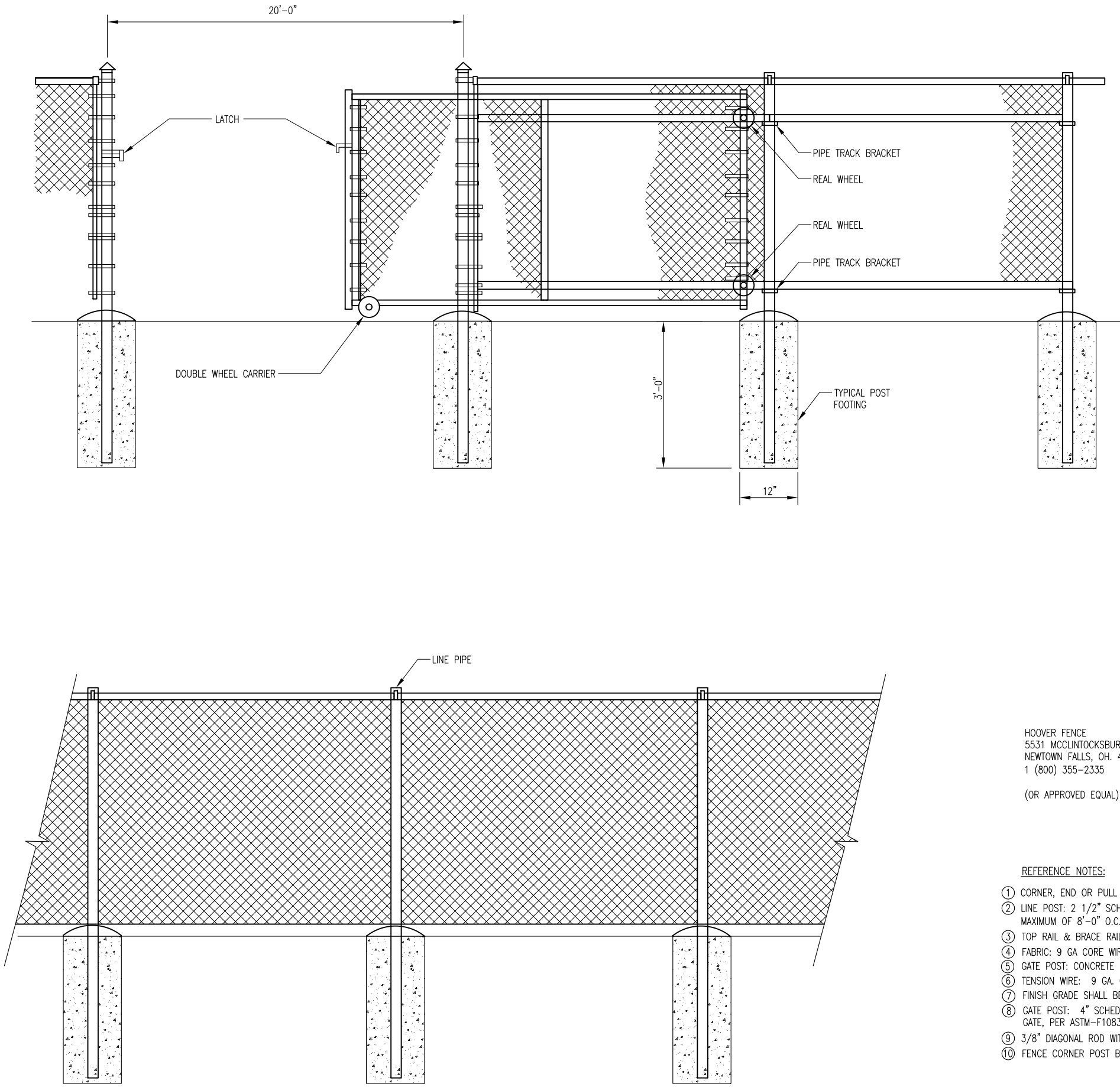
SHEET NUMBER: REV. #

A-2

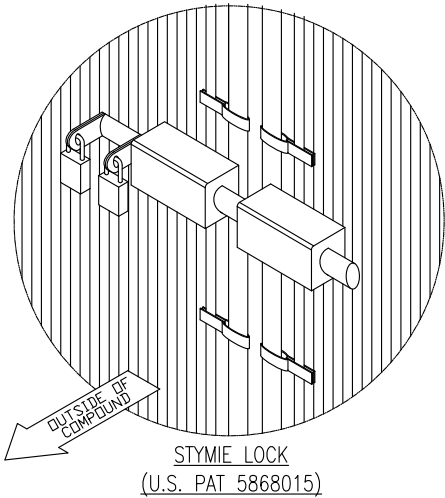
1

SIGNAGE SPECIFICATIONS

2



CITY OF WILMINGTON
NORTH CAROLINA
Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED
Signed: _____



STORE EXTRA PARTS OF MULTI-LOCK
DEVICE IN TELCO CABINET.

NO PLUNGER OR MUSHROOM REQUIRED.

APPROVED CONSTRUCTION PLAN

NAME	DATE
PLANNING	_____
TRAFFIC	_____
FIRE	_____

HOOVER FENCE
5531 MCCLINTOCKSBURG RD
NEWTOWN FALLS, OH. 44444
1 (800) 355-2335

(OR APPROVED EQUAL)

REFERENCE NOTES:

- CORNER, END OR PULL POST: 3" NOMINAL SCHEDULE 40 PIPE.
- LINE POST: 2 1/2" SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM OF 8'-0" O.C.
- TOP RAIL & BRACE RAIL: 1 1/2" PIPE, PER ASTM-F1083.
- FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- GATE POST: CONCRETE FOUNDATION (3000 PSI).
- TENSION WIRE: 9 GA. GALVANIZED STEEL.
- FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- GATE POST: 4" SCHEDULE 40 PIPE, FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE, PER ASTM-F1083.
- 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- FENCE CORNER POST BRACE: 1 5/8" DIA. EACH CORNER EACH WAY.

AMERICAN TOWER CORPORATION
496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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engineers

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FAX: (703) 671-6300

SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:

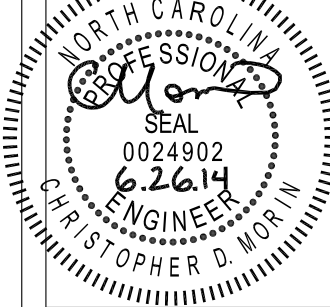
275164

ATC SITE NAME:

**MAC RAE PARK
NC**

SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**

STAMP HERE:



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**FENCE, GATE AND
COMPOUND CROSS
SECTION DETAIL**

SHEET NUMBER: REV. #

A-3

N.T.S.

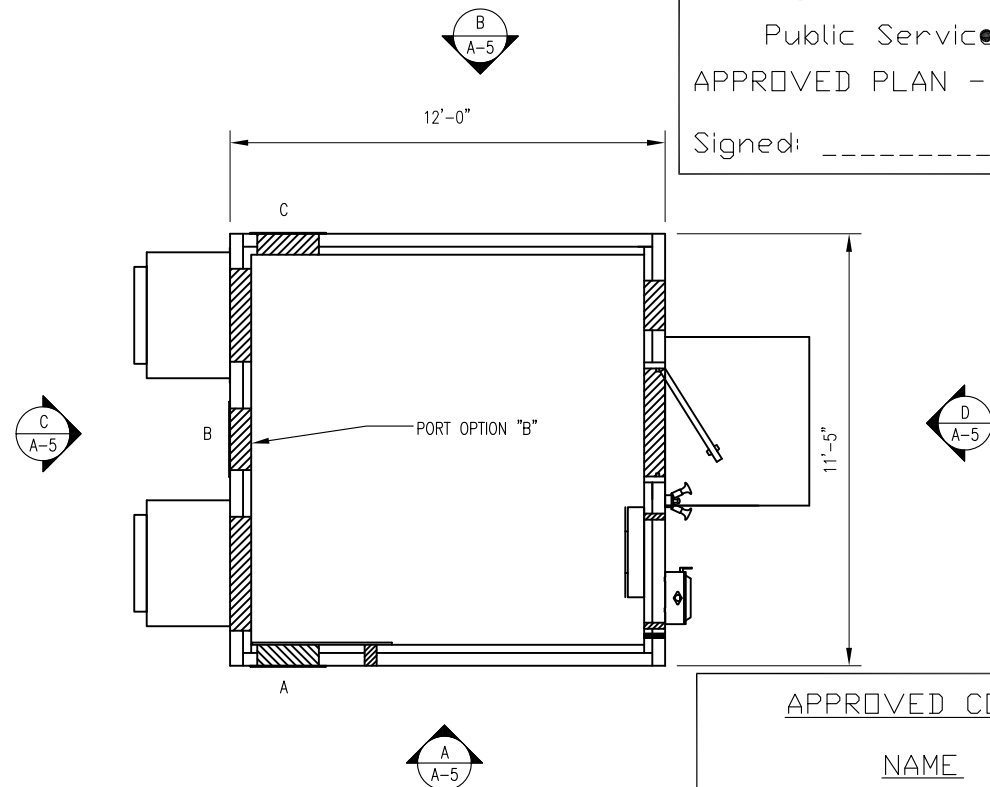
PROPOSED KEY PAD OPERATED ELECTRONIC GATE CROSS SECTION DETAIL

1



Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____



APPROVED CONSTRUCTION PLAN

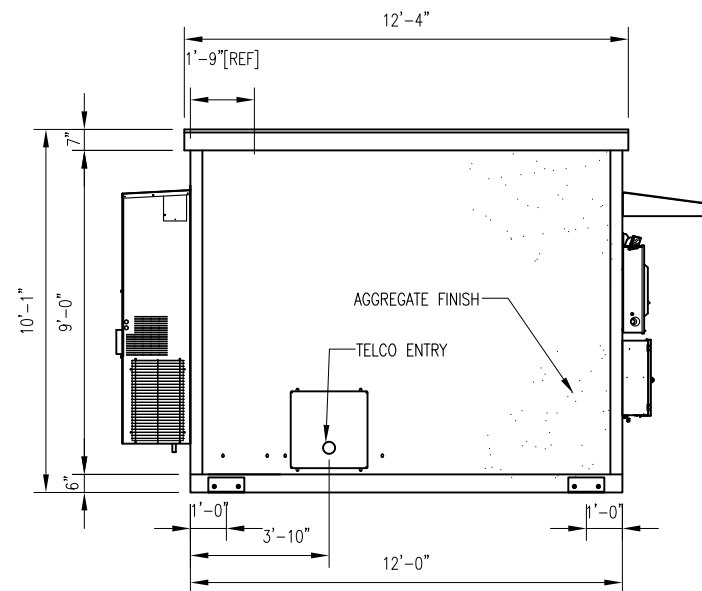
NAME _____

DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____



AMERICAN TOWER
CORPORATION
496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
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SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:

275164

ATC SITE NAME:

**MAC RAE PARK
NC**

SITE ADDRESS:

**4417 LAKE AVE.
WILMINGTON, NC 28409**



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**SHELTER LAYOUT
AND ELEVATIONS**

SHEET NUMBER: REV. #

A-4

N.T.S.

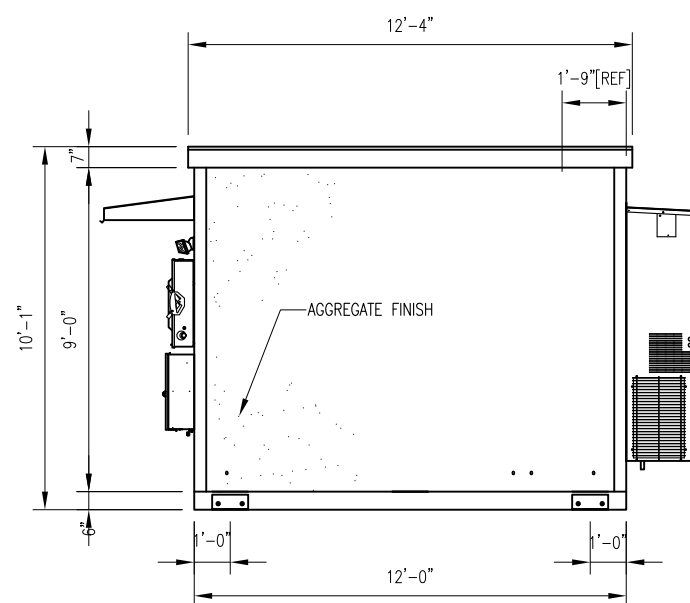
AT&T STANDARD FIBREBOND SHELTER

1

N.T.S.

ELEVATION

A



N.T.S.

ELEVATION

B

N.T.S.

ELEVATION

C

N.T.S.

ELEVATION

D

02-11-14 VICTOR GARCIA 10:34:50 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/A5.dwg

APPROVED CONSTRUCTION PLAN

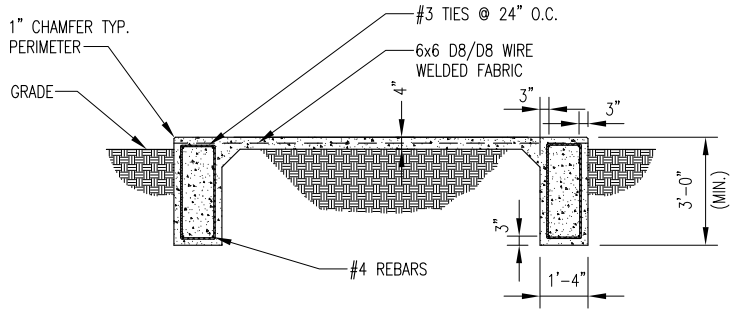
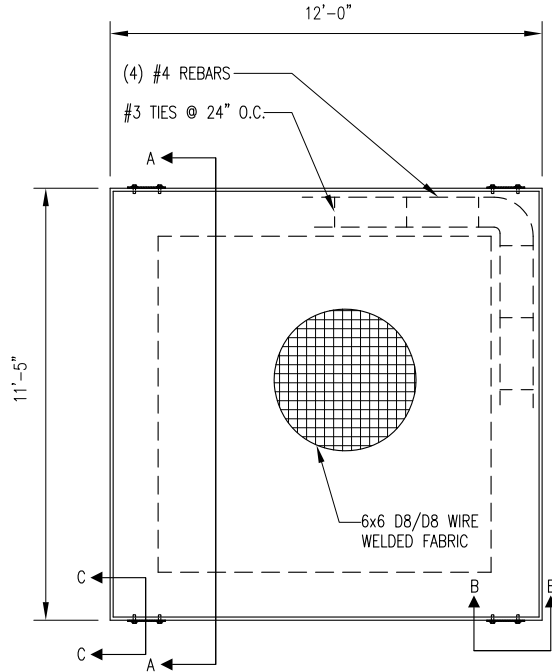
NAME

DATE

PLANNING

TRAFFIC

FIRE



SECTION A - A

- NOTES:
1. SLAB TO BE LEVEL $\pm 1/4"$.
 2. FOOTING TO EXTEND A MINIMUM OF 36" BELOW UNDISTURBED SOIL AND FROST LINE.
 3. FINAL SITE DESIGN IS THE RESPONSIBILITY OF THE SITE CONTRACTOR.
 4. SLAB FOUNDATION DESIGNED ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
 5. SLAB FOUNDATION DESIGNED ASSUMING MAXIMUM SOIL PLASTICITY INDEX OF 27.
 6. CONCRETE STRENGTH SHALL BE A MINIMUM OF 4000 PSI.
 7. FOUNDATION SHALL BE IN ACCORDANCE WITH OBC.

NOTE: DETAIL PROVIDED BY FIBREBOND

CITY OF

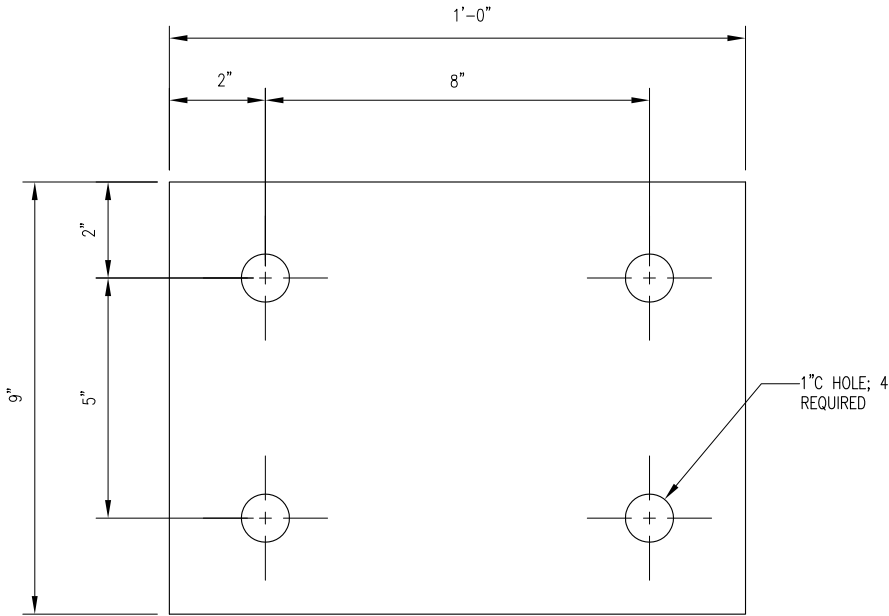
WILMINGTON

NORTH CAROLINA

Public ServicesEngineering Division

APPROVED PLAN - NO PERMIT REQUIRED

Signed:



#193637 - RAW MATERIAL - 3/8" PLATE

N.T.S.

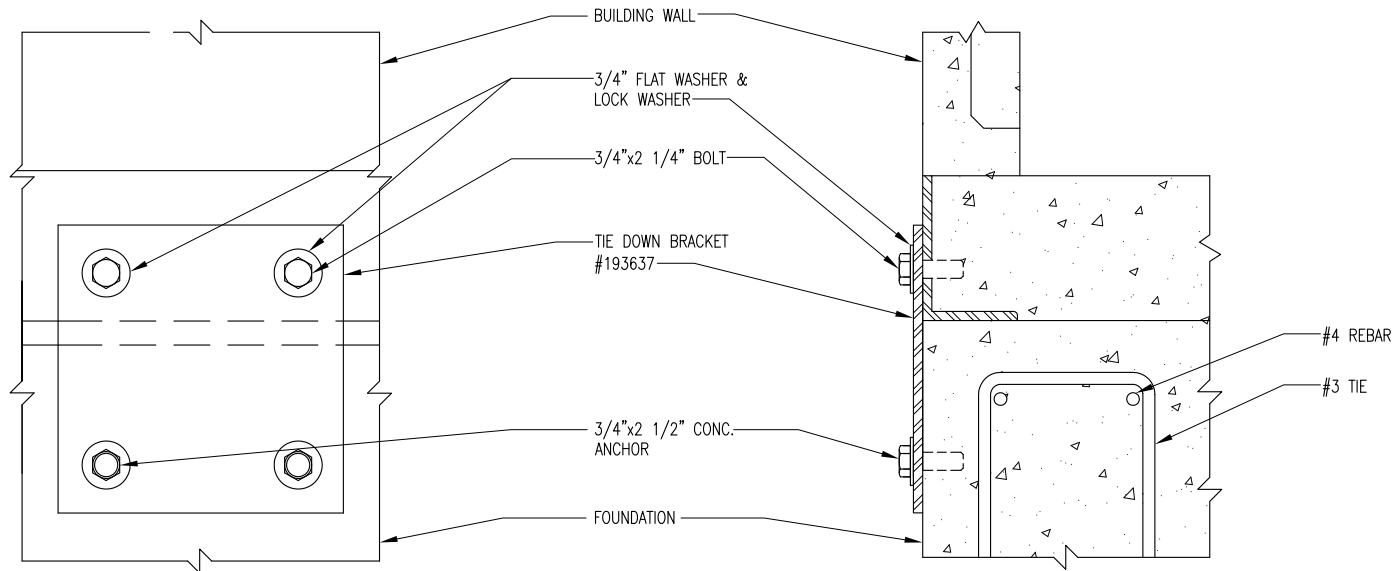
SLAB FOUNDATION

1

N.T.S.

TIE DOWN PLATE DETAIL

2



SECTION B-B

SECTION C-C

NOTE: DETAIL PROVIDED BY FIBREBOND

N.T.S.

SHELTER CONNECTION DETAILS

3

AMERICAN TOWER

CORPORATION

496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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architects
engineers

5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300

SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:
275164

ATC SITE NAME:
MAC RAE PARK NC

SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**

STAMP HERE:

NORTH CAROLINA

PROFESSIONAL

SEAL

0024902

6.26.14

ENGINEER

CHRISTOPHER D. MORIN

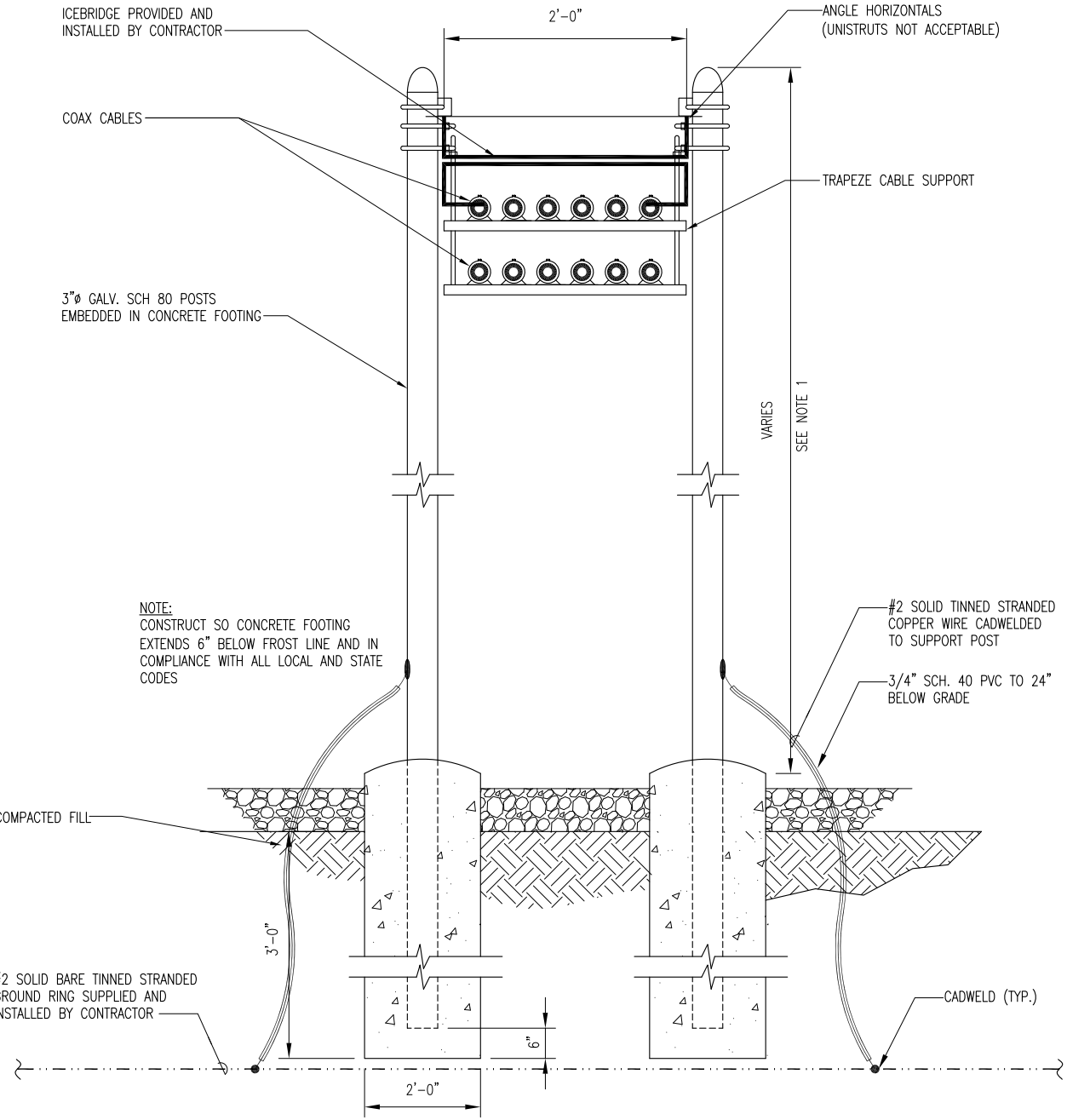
DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:
**SHELTER
FOUNDATION &
CONNECTION DETAILS**

SHEET NUMBER:	REV. #
A-5	

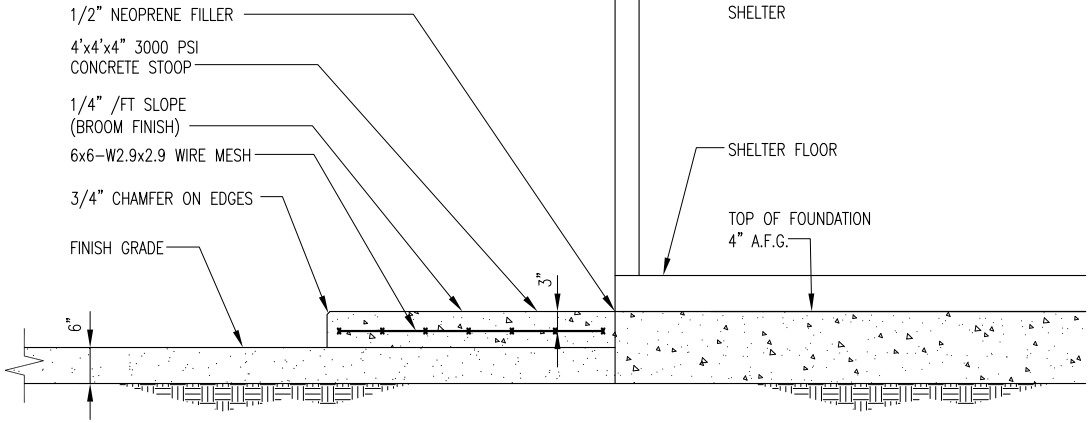
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- NOTES:
- DESIGN REQUIREMENTS ARE PER LOCAL BUILDING CODE/1994 ANSI/ASCE7, EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA SUPPORTING STRUCTURES AND ALL APPLICABLE STATE AND LOCAL CODES. THE BASIC GROUND WIND SPEED UTILIZED FOR DESIGN IS 100 MPH.
 - REFER TO THE SITE PLAN PREPARED BY OTHERS FOR BOUNDARY SURVEY AND SITE TOPOGRAPHY.
 - CONCRETE EQUIPMENT PAD SHALL BE PLACED OVER UNDISTURBED OR WELL COMPACTED SOIL, SEE NOTE 4.
 - EXISTING VEGETATION AND ORGANIC MATERIALS SHALL BE REMOVED FROM THE CONCRETE EQUIPMENT PAD AREAS. FILL SITE TO ORIGINAL ELEVATION WITH CLEAN SANDY SOIL. COMPACT TO OBTAIN 2500 PSF BEARING CAPACITY.
 - ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MINIMUM DIAMETER BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL EXPOSED FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED UNLESS OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS OR EQUIVALENT UNLESS OTHERWISE NOTED.
 - TRANSMITTER EQUIPMENT SHALL BE FURNISHED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF OWNER PROVIDED HARDWARE IS ATTACHED TO BID DOCUMENTS (SEE ATTACHMENT E) ALL OTHER HARDWARE TO BE FURNISHED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
 - SUPPORT POSTS SHALL BE SPACED 4'-0" MAX.
 - CABLE SUPPORT SPACING SHALL BE 3'-0" MAX.
 - ICE BRIDGE SHALL BE GALVANIZED GRIP-STRUT.
 - CONTRACTOR SHALL FURNISH AND INSTALL ICE BRIDGE STRUCTURE.



N.T.S. CABLE SUPPORT POST ELEVATION

1



N.T.S. CONCRETE STOOP DETAIL

2

WILMINGTON

CITY OF

NORTH CAROLINA

Public Services Engineering Division

APPROVED PLAN – NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____

AMERICAN TOWER

CORPORATION

496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
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engineers

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FAX: (703) 671-6300

SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
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ATC SITE NUMBER:
275164

ATC SITE NAME:
MAC RAE PARK
NC

SITE ADDRESS:
4417 LAKE AVE.
WILMINGTON, NC 28409

STAMP HERE:

NORTH CAROLINA

PROFESSIONAL

SEAL

0024902

6.26.14

ENGINEER

CHRISTOPHER D. MORIN

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DATE DRAWN:	03-24-14
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DETAILS

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A-6	

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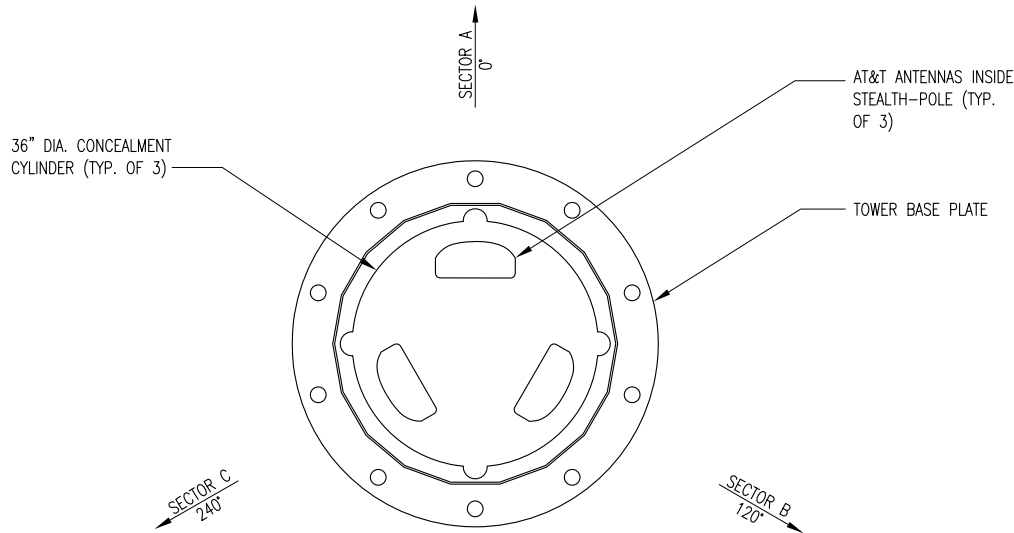
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DATE

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TRAFFIC

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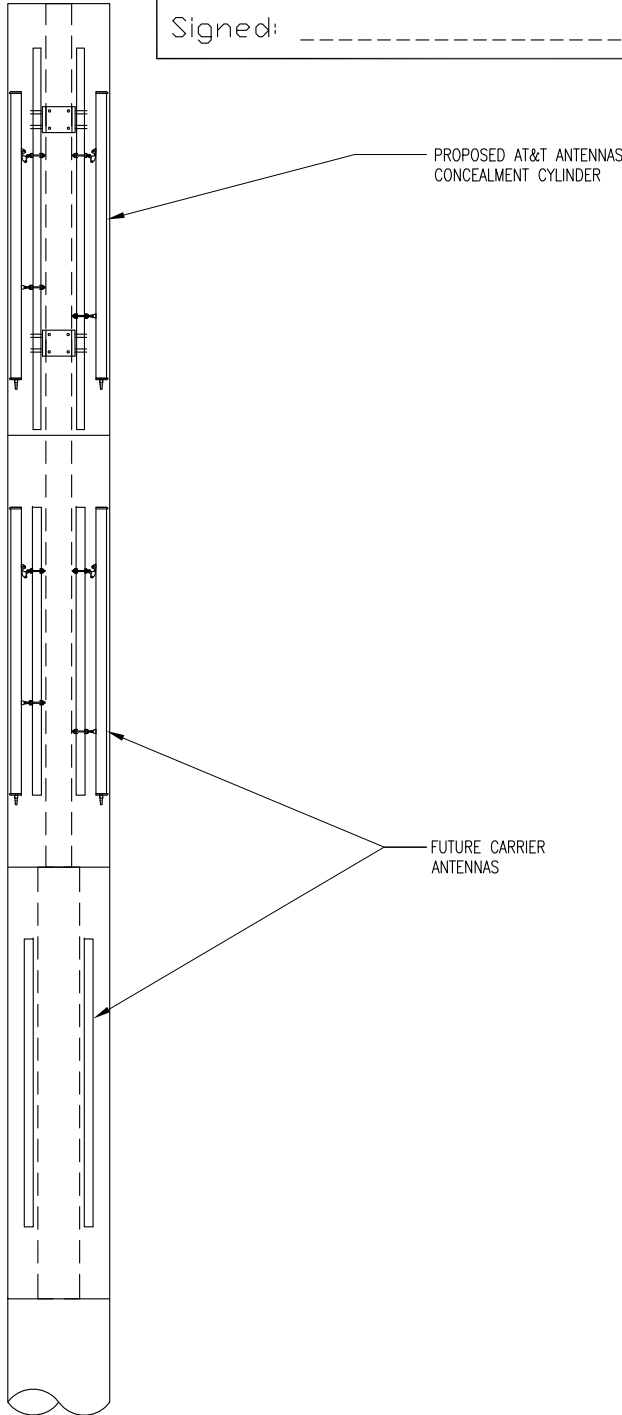
PLAN VIEW OF AT&T ANTENNAS

1

N.T.S.

ELEVATION OF AT&T ANTENNAS

2



CITY OF

WILMINGTON

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Public ServicesEngineering Division

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Signed: _____

USE AMERISTAR
T-HINGE OR
APPROVED EQUAL
(TYP.)

12' WIDE
DOUBLE GATE

SIMPSON 66L
STRAP TIE (TYP.)

BARBED WIRE: 3 STRAND
12-1/2" O.D. TWISTED WIRE
TO MATCH WITH FABRIC 14
GA, 4 PT. BARBS SPACED ON
APPROXIMATELY 5" CENTERS.

1"x6" PRESSURE TREATED
VERTICAL MEMBER (TYP.)

NOTE:
ALL WOOD ASSEMBLY
SHALL BE WITH GALV.
SCREWS.

4"x4" PRESSURE TREATED WOOD POST
(TYP.) USE 6"x6" @ FENCE CORNERS
& GATE POSTS

CONCRETE FOUNDATION

LOCATE STYMIE LOCK ON
GATE SO THAT IT DOES
NOT EXCEED 4'-0" FROM
GROUND ELEVATION

SCREW DIAGONAL MEMBER
TO FRAME W/ 2 1/2" MIN.
GALV. SCREWS

10'-0" MAX.

SIMPSON A35 FRAMING
ANCHOR (TYP.)

2"x4" PRESSURE
TREATED HORIZONTAL
MEMBER (TYP.)

1"x6" VERTICAL
MEMBER (TYP.)

4"x4" PRESSURE TREATED WOOD POST
(TYP.) USE 6"x6" @ FENCE CORNERS &
GATE POSTS

SECTION A-A

3' MIN.

1'-6" Ø

GRADE

±8'-0"

12"

APPROVED CONSTRUCTION PLAN

DATE _____

NAME _____

PLANNING _____

TRAFFIC _____

FIRE _____

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SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
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ATC SITE NUMBER:

275164

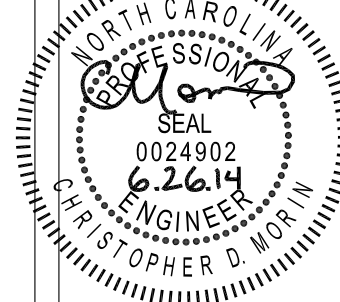
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SITE ADDRESS:

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WILMINGTON, NC 28409**

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SUBMISSION:	FINAL CD'S

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**WOOD FENCE
DETAILS**

SHEET NUMBER:	REV. #
A-8	1

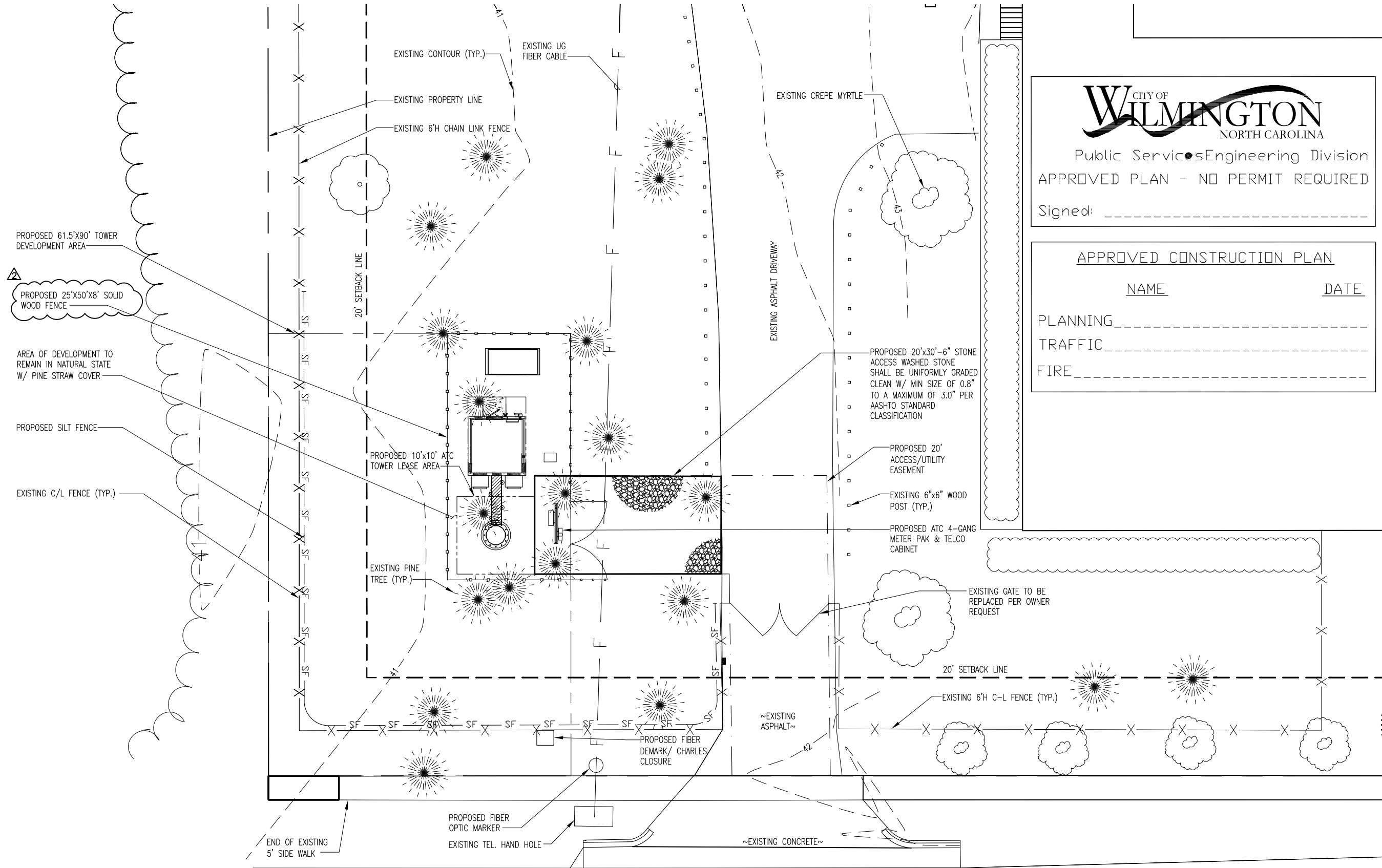
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WOOD FENCE DETAILS

1

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04-24-14 ARNOLD 16:30:25



1"=17' - 1"=20'
24"x36" - 1"=10'

EROSION & SEDIMENT CONTROL PLAN

NOTE:
PER NHC, THERE IS NO EXISTING E&S PLAN
EROSION CONTROL PERMIT ON THIS PARCEL.



CITY OF
WILMINGTON
NORTH CAROLINA

Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____
TRAFFIC _____
FIRE _____

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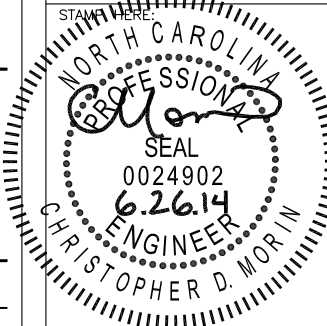
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SHEET REVISION			
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1	NEW SHEET	AGT	04-24-14
2	CORRECT TITLE	DS	06-24-14
3			
4			
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6			

ATC SITE NUMBER:
275164
ATC SITE NAME:
MAC RAE PARK NC
SITE ADDRESS:
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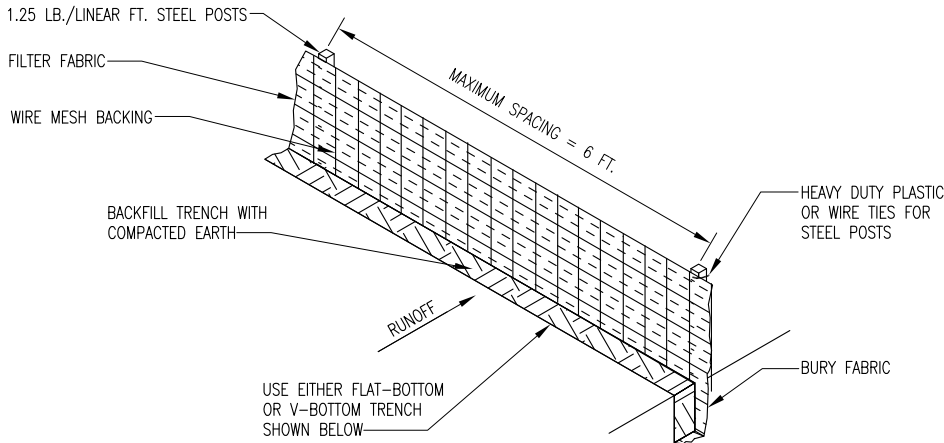
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DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

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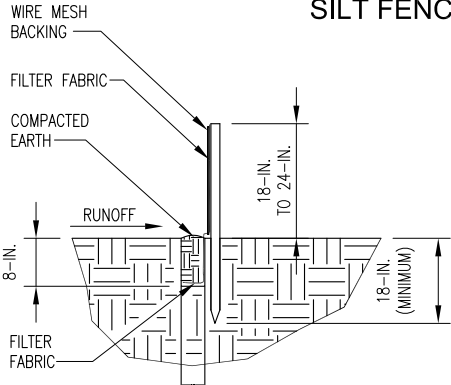
**EROSION AND
SEDIMENT
CONTROL PLAN**

SHEET NUMBER:	REV. #
G-1	2

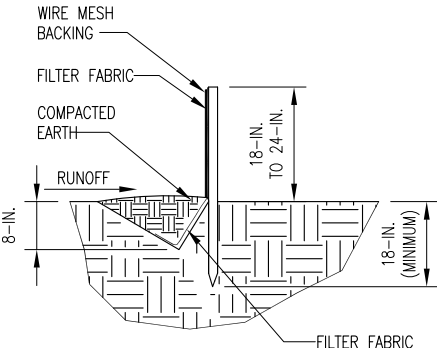
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SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

SILT FENCE DETAIL

WHEN AND WHERE TO USE IT

SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100- FEET. WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V. THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS

STEEL POSTS

USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS: COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI. HAVE A STANDARD "I" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "I" LENGTH OF 1.48-INCHES. WEIGH 1.25 POUNDS PER FOOT (± 8%). HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS. PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4- FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY. THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS: BE COMPOSED OF MINIMUM 15 GAUGE STEEL. HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

STEEL WIRE MESH

BACK THE FABRIC WITH A WIRE MESH OF 32" MINIMUM WIDTH, AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING. TOP AND BOTTOM STRANDS SHALL BE MINIMUM #10 GAUGE WITH #12 1/2 GAUGE STAY WIRES.

GEOTEXTILE FILTER FABRIC

FILTER FABRIC IS: COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES. FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER. FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION. FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES. CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

SILT FENCE DETAIL

INSTALLATION

EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT.BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3- FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6- FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1½-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILLREMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6- FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE

INSPECT EVERY SEVEN CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES ½-INCHES OR MORE OF PRECIPITATION. CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.



Public ServicesEngineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

NAME _____

DATE _____

PLANNING_____

TRAFFIC_____

FIRE_____

CONSTRUCTION SEQUENCE

ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

1. PICK UP PERMIT FROM CITY OF WILMINGTON.
2. CONTACT CITY OF WILMINGTON TO SCHEDULE PRE-CONSTRUCTION MEETING.
3. PRE-CONSTRUCTION MEETING (ON-SITE).
4. INSTALLATION OF CONSTRUCTION ENTRANCE(S)
5. CLEARING AND GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
6. INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE)
7. CLEARING AND GRUBBING ONLY IN AREAS OF CULVERTS AND OTHER SEDIMENTATION CONTROL DEVICES.
8. INSTALLATION OF CULVERTS (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES AND DIVERSIONS TO THE STRUCTURES ARE COMPLETELY INSTALLED)
9. CLEARING AND GRUBBING OF SITE OR DEMOLITION (SEDIMENT AND EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED)
10. ROUGH GRADING, & INSTALLATION OF COMPOUND/TOWER/FENCING/UTILITIES AND LANDSCAPING.
11. FINE GRADING, PAVING, ETC.
12. PERMANENT/FINAL STABILIZATION OF DISTURBED AREA.
13. REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE COUNTY WILL DETERMINE WHEN TO REMOVE ALL TEMPORARY STRUCTURES.)
15. SUBMIT NOTICE OF TERMINATION TO SPARTANBURG COUNTY AS APPROPRIATE.

NOTE:

IF FLOWS FROM OFFSITE AREAS WILL BE DIVERTED AROUND THE SITE AND THE ON-SITE STRUCTURES ARE NOTE DESIGNED TO HANDLE FLOWS FROM THE OFFSITE AREAS, THEN THE DIVERSIONS/PIPING FOR THE OFFSITE FLOWS MUST BE INSTALLED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE; INCLUDE THIS IN THE SEQUENCE. SEDIMENT AND EROSION CONTROL MEASURES FOR THE DISTURBED AREAS FOR THE DIVERSION/PIPING MUST BE INSTALLED BEFORE THOSE AREAS ARE DISTURBED AND SHOULD BE SHOWN ON THE PLANS.

NOTE:

IF AN EXISTING DETENTION/SEDIMENT BASIN IS BEING MODIFIED TO HANDLE THE FLOWS FROM THE PROPOSED DEVELOPMENT, THEN IT MUST BE MODIFIED BEFORE LAND-DISTURBING ACTIVITIES BEGIN ON THE SITE. THIS SHOULD BE INCLUDED IN THE SEQUENCE.

NOTE:

INSTALLATION OF SOME PERMANENT WATER QUALITY DEVICES SHOULD OCCUR AFTER THE SITE IS STABILIZED; INCLUDE THIS IN THE SEQUENCE. CLEANOUT OF OTHER WATER QUALITY DEVICES THAT WERE USED DURING CONSTRUCTION SHOULD OCCUR AFTER SITE STABILIZATION.

NOTE:

MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.



AMERICAN TOWER CORPORATION

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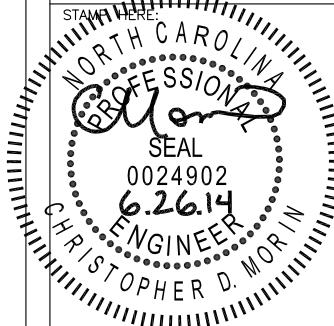
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SHEET TITLE:

SILT FENCE
DETAILS &
NOTES

SHEET NUMBER: REV. #

G-2

2

N.T.S.

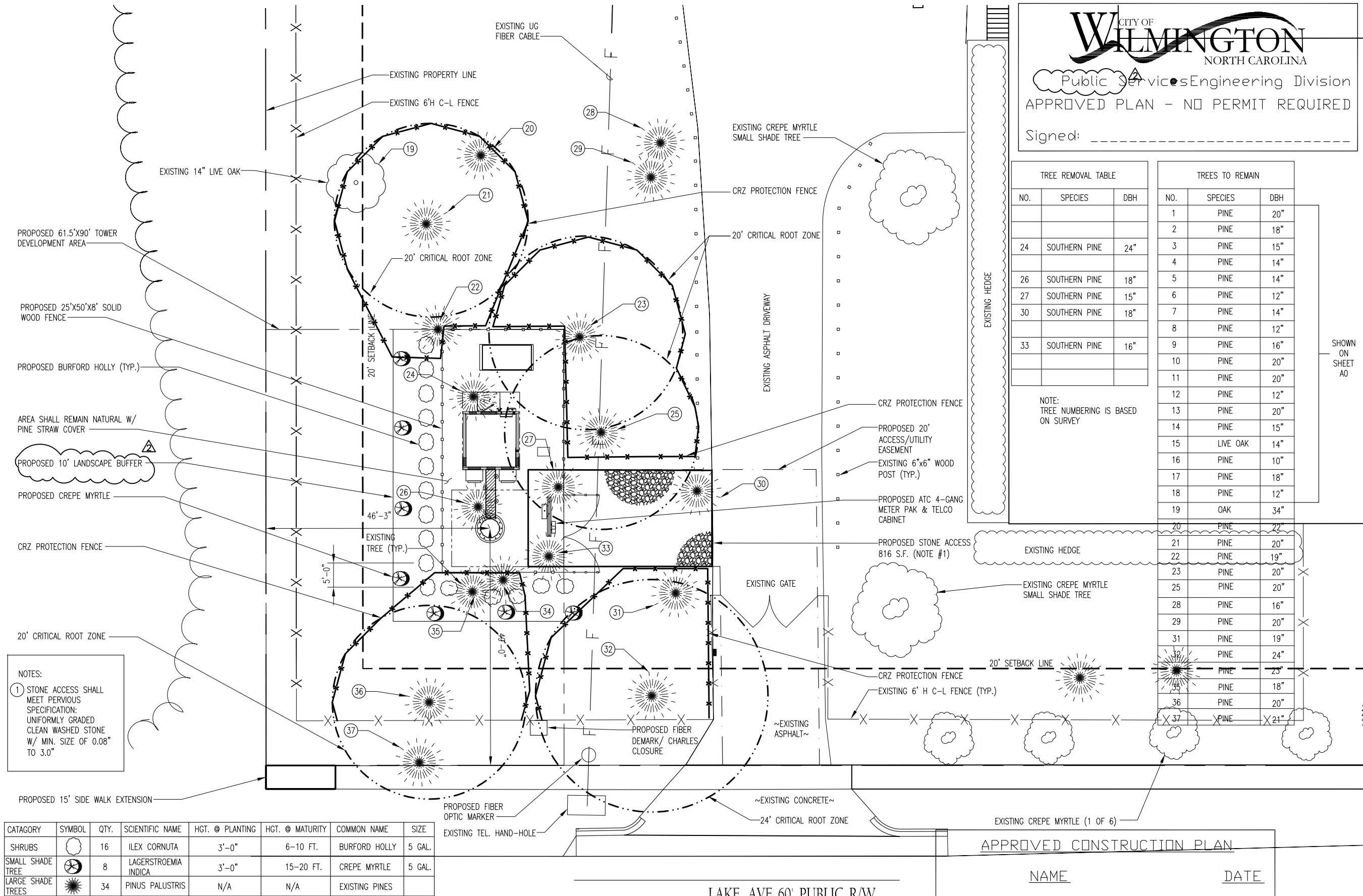
SILT FENCE DETAILS & NOTES

1

CONSTRUCTION SEQUENCE

2

Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's Rev 3 2014-06-26/L1.dwg
06-26-14 ARNOLD 13:14:44



CITY OF
WILMINGTON
NORTH CAROLINA

Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

TREE REMOVAL TABLE		
NO.	SPECIES	DBH
24	SOUTHERN PINE	24"
26	SOUTHERN PINE	18"
27	SOUTHERN PINE	15"
30	SOUTHERN PINE	18"
33	SOUTHERN PINE	16"

NOTE:
TREE NUMBERING IS BASED
ON SURVEY

TREES TO REMAIN		
NO.	SPECIES	DBH
1	PINE	20"
2	PINE	18"
3	PINE	15"
4	PINE	14"
5	PINE	14"
6	PINE	12"
7	PINE	14"
8	PINE	12"
9	PINE	16"
10	PINE	20"
11	PINE	20"
12	PINE	12"
13	PINE	20"
14	PINE	15"
15	LIVE OAK	14"
16	PINE	10"
17	PINE	18"
18	PINE	12"
19	OAK	34"
20	PINE	22"
21	PINE	20"
22	PINE	19"
23	PINE	20"
25	PINE	20"
28	PINE	16"
29	PINE	20"
31	PINE	19"
32	PINE	24"
34	PINE	23"
35	PINE	18"
36	PINE	20"
37	PINE	21"

SHOWN
ON
SHEET
A0

AMERICAN TOWER
CORPORATION
496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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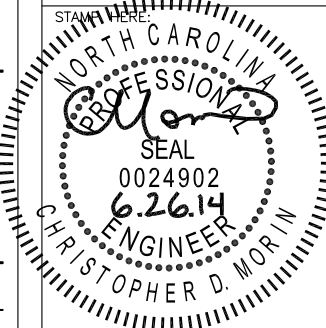
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architects
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5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
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FAX: (703) 671-6300

SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1	CITY CHGS.	AGT	04-24-14
2	CITY CHANGES	DS	06-24-14
3	CITY CHANGES	AGT	06-26-14
4			
5			
6			

ATC SITE NUMBER:
275164
ATC SITE NAME:
MAC RAE PARK NC
SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**TREE REMOVAL &
LANDSCAPE PLAN**

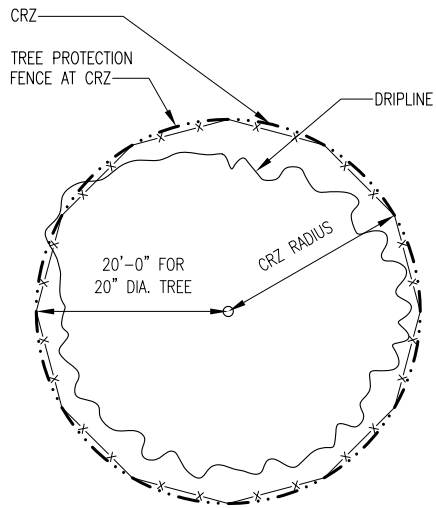
SHEET NUMBER: **L-1** REV. # **3**



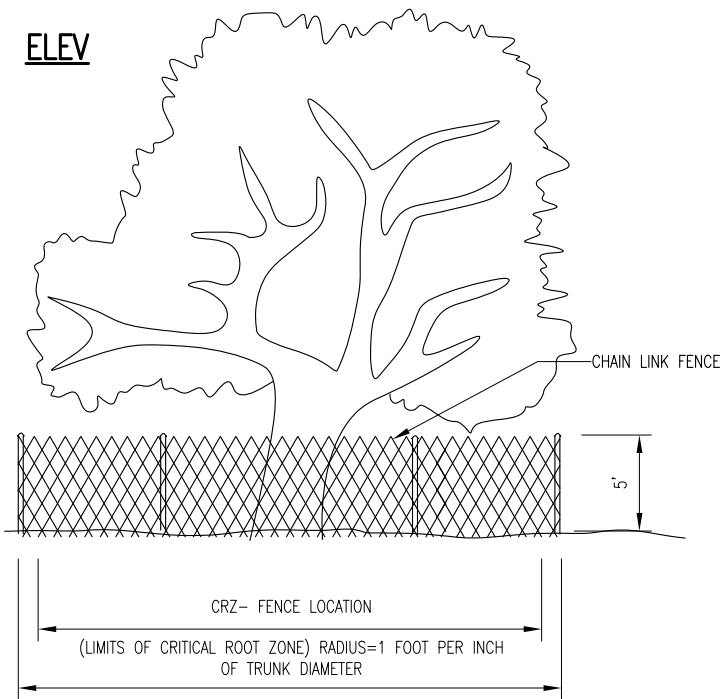
11'x17' - 1"=20'
24'x36' - 1"=10'

TREE REMOVAL & LANDSCAPE PLAN

Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's Rev 3 2014-06-26/L2.dwg 06-26-14 ARNOLD 13:19:37

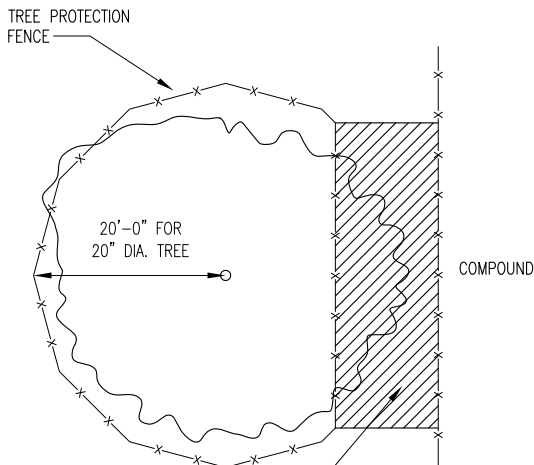


ELEV

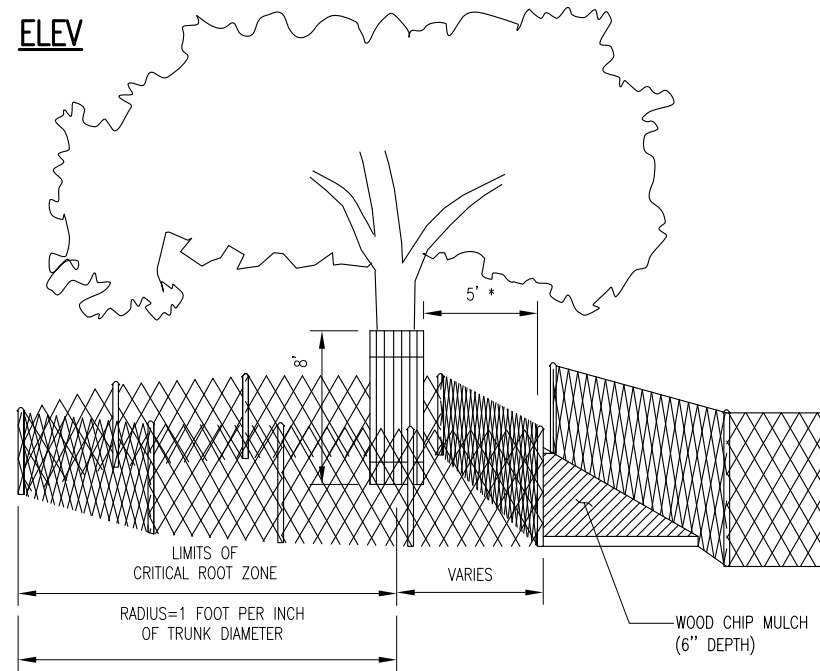


PLAN

THIS DETAIL TO BE USED ONLY IF PROTECTED TREE IS IN CLOSE PROXIMITY TO COMPOUND



ELEV



PLAN

N.T.S.

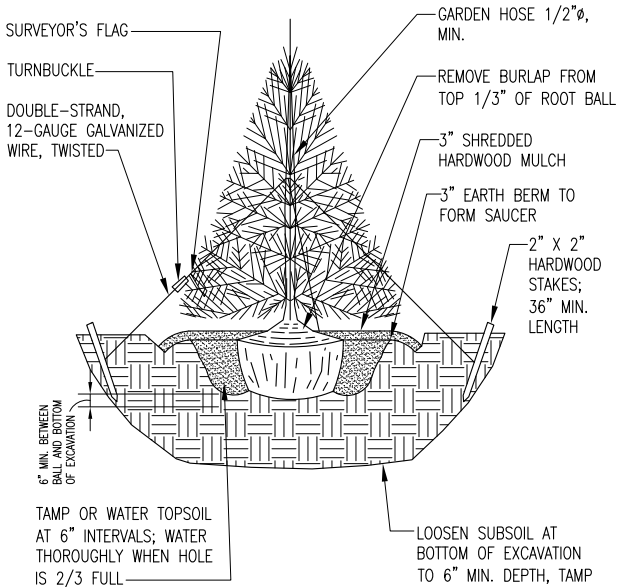
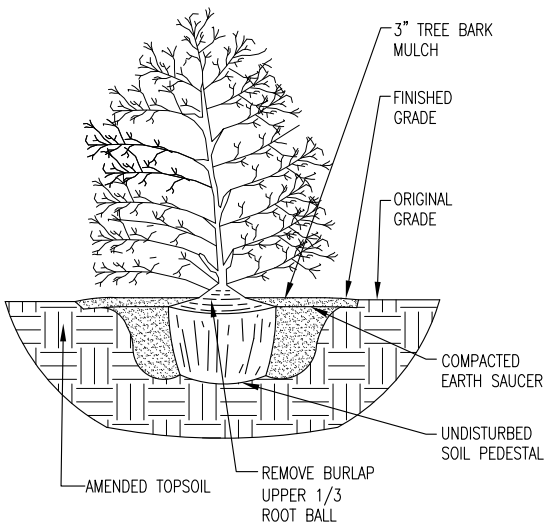
TREE PROTECTION FENCING DETAIL (GENERAL)

1

N.T.S.

TREE PROTECTION FENCING DETAIL (NEAR COMPOUND)

2



NOTE(S):

1. DECIDUOUS TREE SHALL BE 3' IN HEIGHT AT TIME OF PLANTING.
2. SPECIES OF TREE SHALL BE CREPE MYRTLE.

NOTES:

1. EXISTING TREES AND PLANTS ARE BEING USED TO MEET LANDSCAPE CODE REQUIREMENTS. IF ANY TREES DIE OR ARE REMOVED THEY WILL BE REPLACED AS PER THE LANDSCAPE CODE REQUIREMENTS.
2. ALL PLANT MATERIAL LOCATED WITHIN THE CONSTRUCTION AREA THAT IS DAMAGED OR REMOVED DUE TO WORK REQUIRED BY THE UTILITY COMPANY SHALL BE IMMEDIATELY REPLACED BY THE OWNER IN ACCORDANCE WITH LANDSCAPE CODE REQUIREMENTS.
3. GRASS OR GROUND COVER SHALL BE PLANTED ON ALL PORTIONS OF THE LANDSCAPE BUFFER AREA NOT OCCUPIED BY OTHER LANDSCAPE MATERIAL.
4. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR BY THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST, WHILE OTHER DEFECTIVE PLANT MATERIAL SHALL BE REPLACED OR REPAIRED WITHIN THREE (3) MONTHS.
5. DIMENSION LINES HAVE BEEN USED ON THIS PLAN TO ESTABLISH THE GENERAL LOCATION OF TREE CANOPY PROTECTION AREA (TCPAs) AND REPRESENT MINIMUM DISTANCES. THE FINAL BOUNDARY FOR EACH TCPA SHALL BE ESTABLISHED IN THE FIELD TO INCLUDE CANOPY AREA OF ALL TREES AT OR WITHIN THE DIMENSION LINE.
6. TREE PROTECTION FENCING SHALL BE ERECTED ADJACENT TO ALL TCPAs PRIOR TO SITE DISTURBANCE APPROVAL TO PROTECT THE EXISTING TREE STANDS AND THEIR ROOT SYSTEMS. THE FENCING SHALL BE LOCATED AT THE CRITICAL ROOT ZONE RADIUS AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED.
7. DURING ALL CONSTRUCTION ACTIVITY (INCLUDES CLEARING, GRADING, BUILDING CONSTRUCTION, AND UTILITY CONSTRUCTION) A COPY OF THE APPROVED TREE PRESERVATION PLAN SHALL BE ON-SITE.
8. SINAGE IS REQUIRED ON TREE PROTECTION FENCING. SINAGE SHALL READ: "TREE PROTECTION AREA: DO NOT ENTER". SIGNS SHALL BE WRITTEN IN BOTH ENGLISH AND SPANISH.
9. SIGNS SHALL BE SPACED AT 50 FT. INTERVALS WITH AT LEAST 2 SIGNS PER TREE PROTECTION AREA.

CITY OF WILMINGTON
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Public Services Engineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

NAME _____

DATE _____

PLANNING _____
TRAFFIC _____
FIRE _____

N.T.S.

SHRUB PLANTING DETAIL

3

N.T.S.

TREE PLANTING DETAIL

4

LANDSCAPING NOTES

5

AMERICAN TOWER CORPORATION
496 LONG POINT ROAD
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SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1	NEW SHEET	AGT	04-24-14
2	CITY COMMENTS	AGT	06-24-14
3	CITY CHANGES	AGT	06-26-14
4			
5			
6			

ATC SITE NUMBER:

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ATC SITE NAME:

MAC RAE PARK
NC

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DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

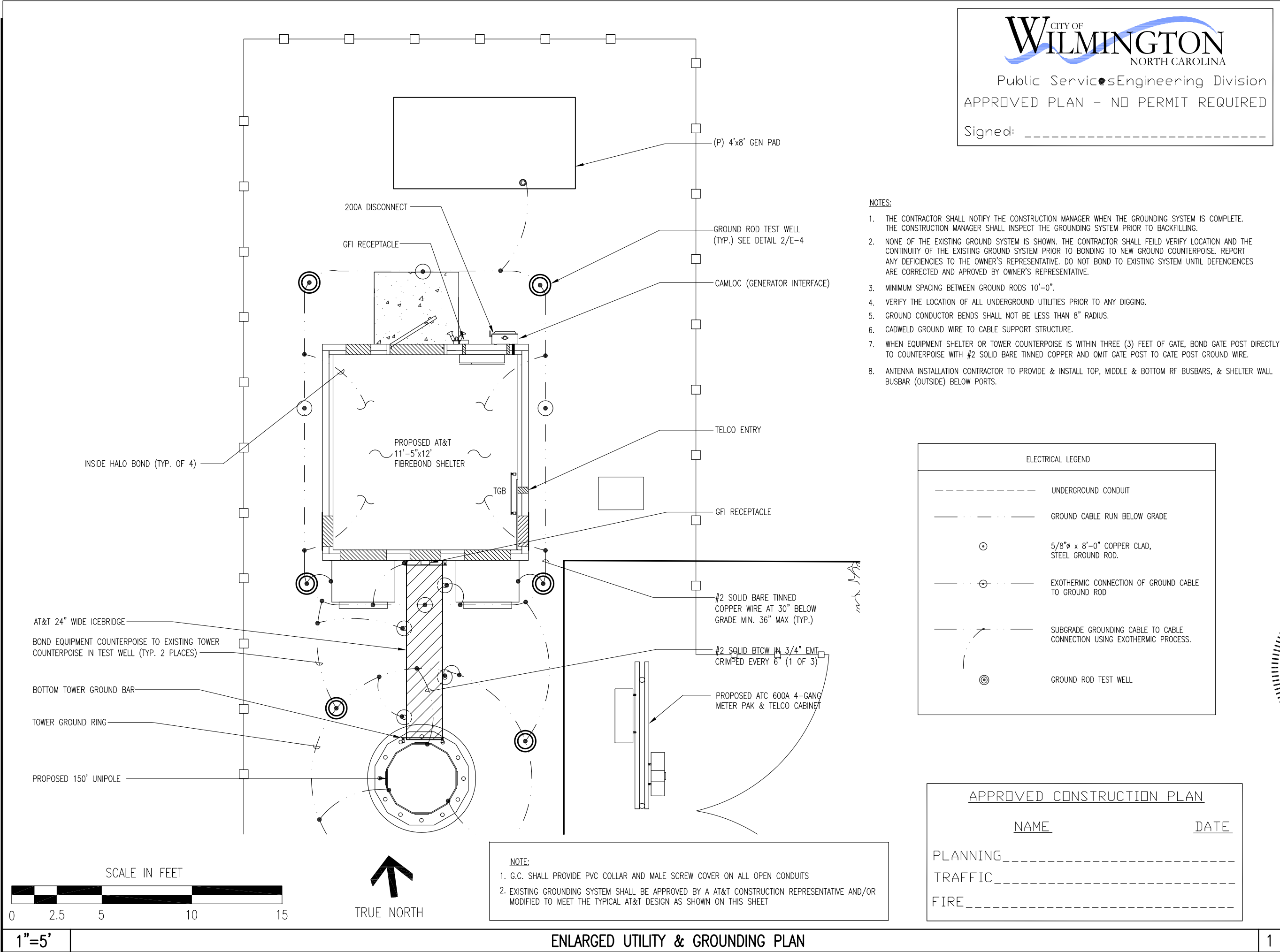
LANDSCAPING
NOTES &
PROTECTION DETAILS

SHEET NUMBER: REV. #

L-2

3

02-11-14 VICTOR GARCIA 16:54:37 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/E2.dwg



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BC architects engineers
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SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:
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ATC SITE NAME:
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WILMINGTON, NC 28409**

STAMP HERE:

CHRISTOPHER D. MORIN
ENGINEER

DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

ENLARGED GROUNDING PLAN

SHEET NUMBER:	REV. #
E-2	

02-11-14 VICTOR GARCIA 16:52:34 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/E3.dwg

ANTENNA AND COAXIAL CABLE SCHEDULE															
ANTENNA MARK	SECTOR	ANTENNA	AZIMUTH	RAD CENTER	COAXIAL CABLE FEED LOCATION	COAX MFG	COAX LENGTH	COAXIAL CABLE SIZE	MIN. BENDING RADIUS	TMA MODEL	RRU MODEL	TECHNOLOGY	TAPE COLOR	TRX ANTENNA CONFIGURATION	DOWNTILT (ELEC.)
A-1	1	ANDREW SBNHH-1D65C	0°	145'	BOTTOM	ANDREW	175'	1 1/4" Ø	20"	N/A	ERICSSON RRUS01	LTE	RED	TX/RX1	4°
-	-		-	145'	-	ANDREW	175'	1 1/4" Ø	20"	STI 1900AL	-	UMTS	(2) RED	TX	4°
A-2	-	ANDREW SBNHH-1D65C	-	133'	-	ANDREW		-	20"	-	-	-	-	TX	4°
-	-		-	133'	-	ANDREW		-	20"	-	-	-	-	TX/RX2	4°
B-1	2	ANDREW SBNHH-1D65C	120°	145'	BOTTOM	ANDREW	175'	1 1/4" Ø	20"	N/A	ERICSSON RRUS01	LTE	BLUE	TX/RX1	4°
-	-		-	145'	-	ANDREW	175'	1 1/4" Ø	20"	STI 1900AL	-	UMTS	(2) BLUE	TX	4°
B-2	-	ANDREW SBNHH-1D65C	-	133'	-	ANDREW		-	20"	-	-	-	-	TX	4°
-	-		-	133'	-	ANDREW		-	20"	-	-	-	-	TX/RX2	4°
C-1	3	ANDREW SBNHH-1D65C	240°	145'	BOTTOM	ANDREW	175'	1 1/4" Ø	20"	N/A	ERICSSON RRUS01	LTE	GREEN	TX/RX1	4°
-	-		-	145'	-	ANDREW	175'	1 1/4" Ø	20"	STI 1900AL	-	UMTS	(2) GREEN	TX	4°
C-2	-	ANDREW SBNHH-1D65C	-	133'	-	ANDREW		-	20"	-	-	-	-	TX	4°
-	-		-	133'	-	ANDREW		-	20"	-	-	-	-	TX/RX2	4°
TOTAL LENGTH							1,050'								
													DECLINATION = 9.0° 17' W		

N.T.S. ANTENNA AND COAXIAL CABLE SCHEDULE (REFER TO FINAL RFDS PRIOR TO INSTALLATION) 1

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING_____

TRAFFIC_____

FIRE_____

CITY OF

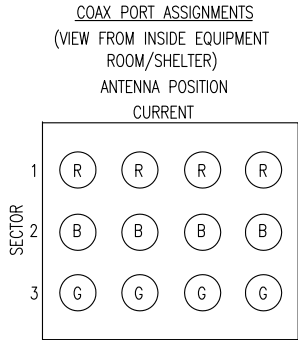
WILMINGTON

NORTH CAROLINA

Public ServicesEngineering Division

APPROVED PLAN - NO PERMIT REQUIRED

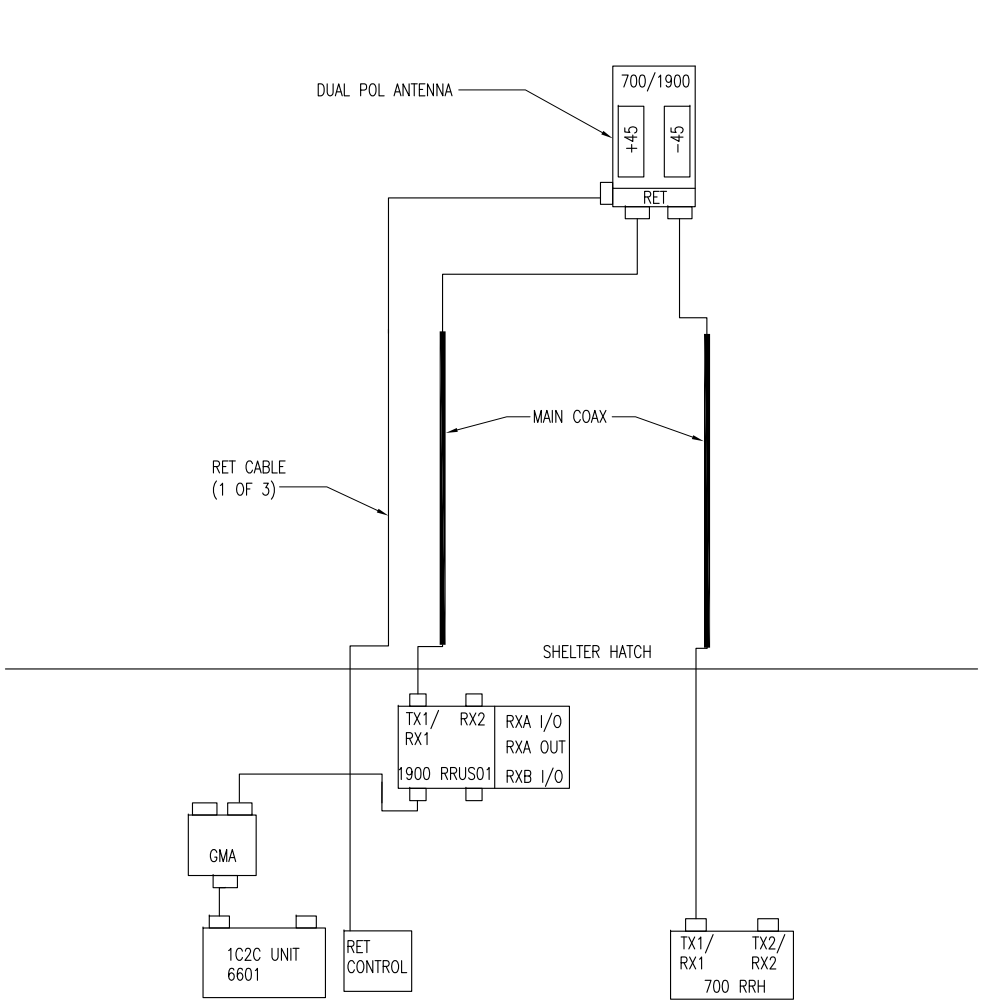
Signed: _____



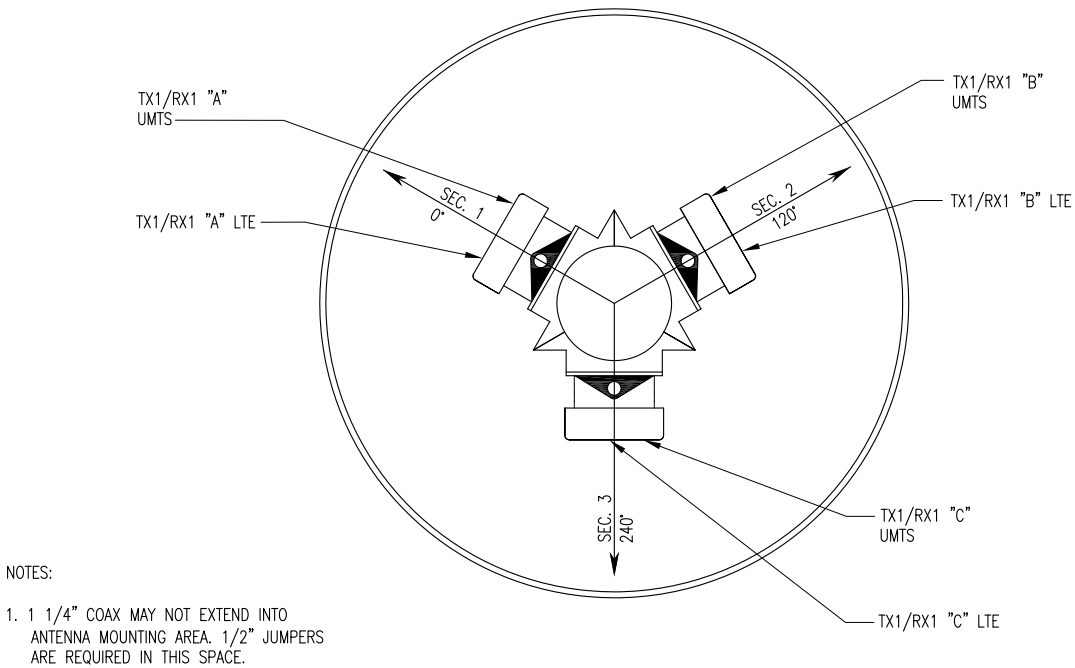
CABLE MARKING LOCATIONS TABLE			
NO.	TAPE	TAG	LOCATIONS
1.	X		EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2.	X		EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3.		X	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER. (IF SHELTER IS USED)
4.	X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5.	*	*	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

- NOTES:
- SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
 - THE STANDARD IS BASED ON EIGHT COLORED TAPED-RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND SLATE (GRAY). THESE TAPES SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
 - USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMERAS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
 - ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
 - ALL COLOR BANDS INSTALLED AT THE TOWER TOP SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACING BETWEEN EACH COLOR.
 - ALL COLOR BANDS INSTALLED AT OR NEAR THE GROUND SHALL BE A MINIMUM OF 3/4" WIDE.
 - ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
 - COLOR CODE AT TOWER AND BEFORE SHELTER.

* (DENOTES TAG OR TAPE)



N.T.S. TYPICAL ANTENNA CABLE CONFIGURATION (1 ANTENNA PER SECTOR) 3



- NOTES:
- 1 1/4" COAX MAY NOT EXTEND INTO ANTENNA MOUNTING AREA. 1/2" JUMPERS ARE REQUIRED IN THIS SPACE.

2 N.T.S. COAX CODES (1 ANTENNA PER SECTOR) 4

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SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:

275164

ATC SITE NAME:

MAC RAE PARK NC

SITE ADDRESS:

4417 LAKE AVE.
WILMINGTON, NC 28409

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PROFESSIONAL SEAL

0024902

6.26.14

ENGINEER

CHRISTOPHER D. MORIN

DRAWN BY:

AGT

CHECKED BY:

DRS

DATE DRAWN:

03-24-14

SUBMISSION:

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SHEET TITLE:

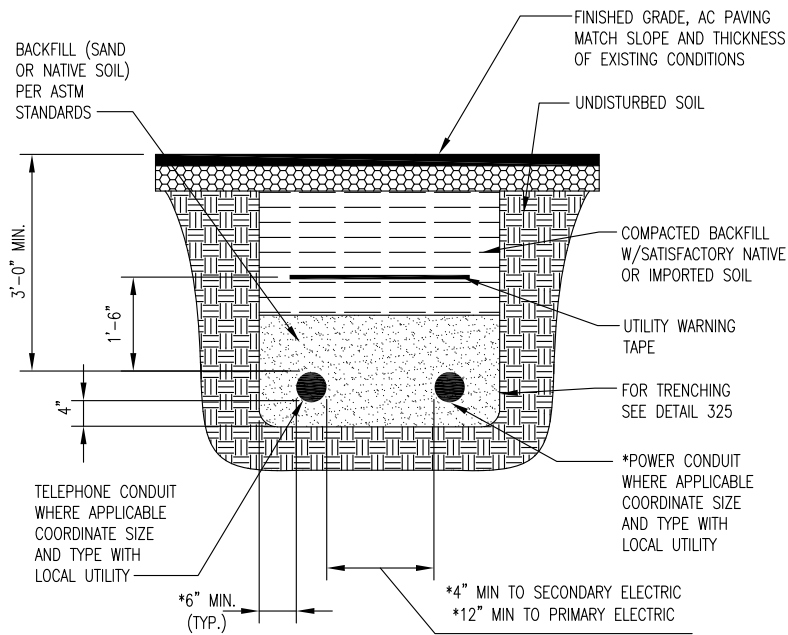
AT&T ELECTRICAL DETAILS

SHEET NUMBER:

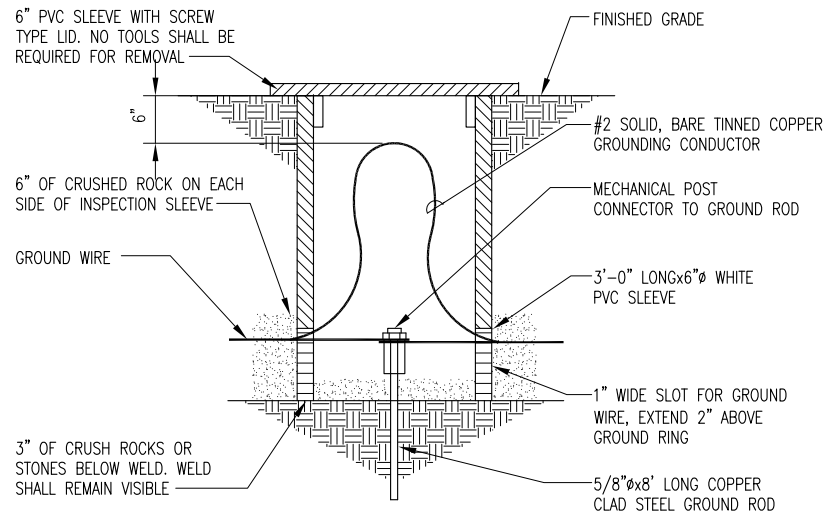
E-3

REV. #

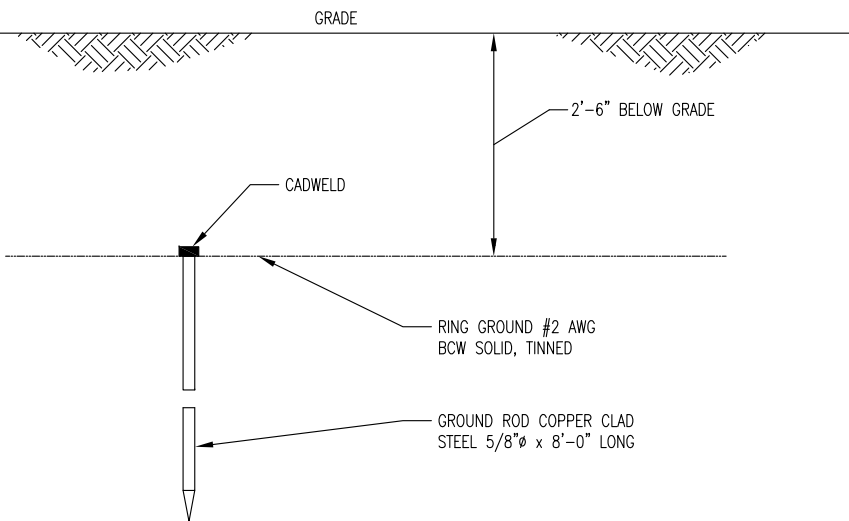
02-11-14 VICTOR GARCIA 10:39:44 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/E4.dwg



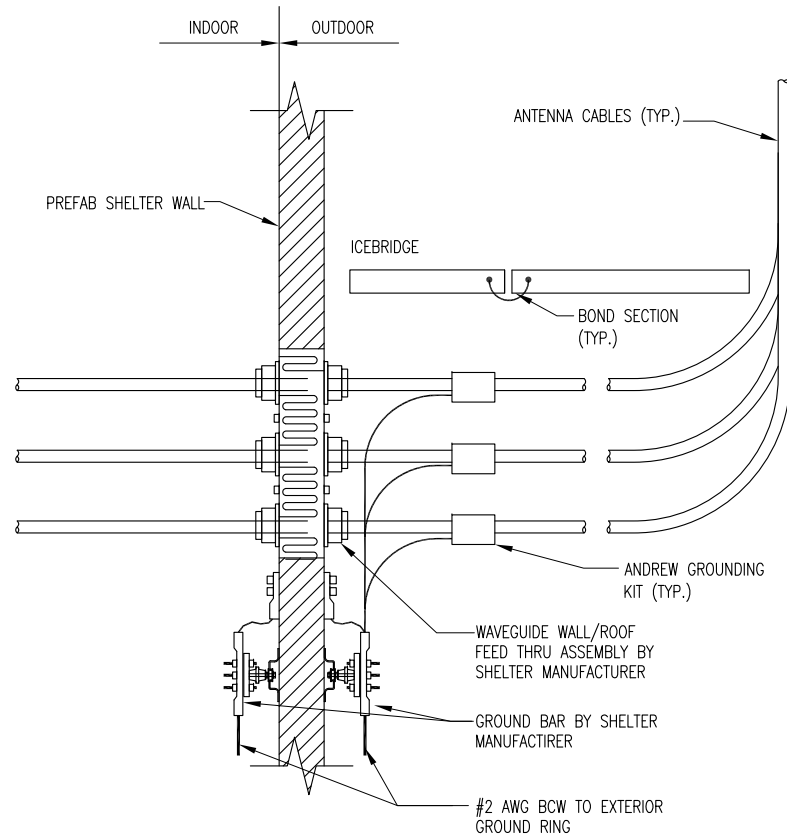
N.T.S. POWER AND TELCO DUCT BANK DETAIL 1



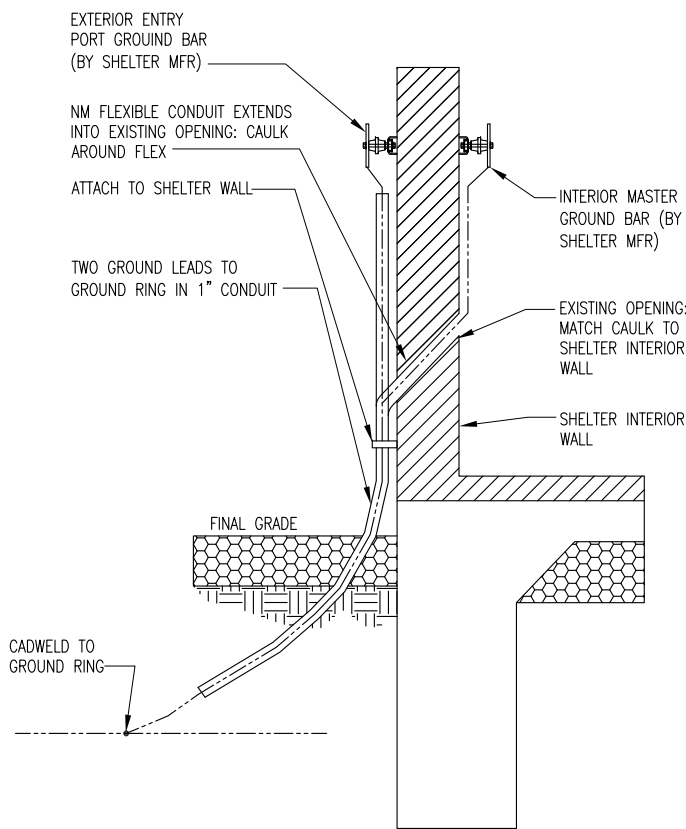
N.T.S. GROUND ROD TEST WELL 2



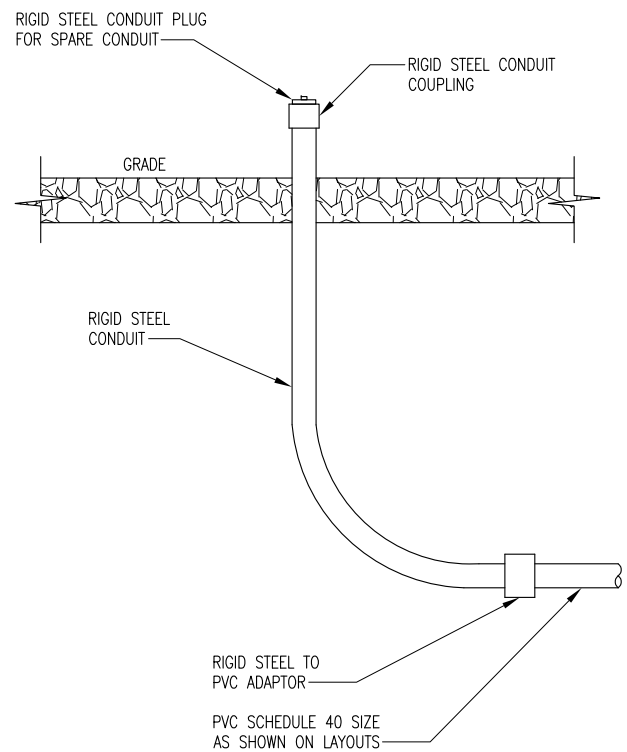
N.T.S. GROUND ROD 3



N.T.S. CABLE INSTALLATION W/ WALL/ROOF FEED THRU ASSEMBLY 4



N.T.S. SHELTER WALL PENETRATION DETAIL 5



N.T.S. UNDERGROUND CONDUIT STUB-UP 6

CITY OF WILMINGTON
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NAME _____ DATE _____
PLANNING _____
TRAFFIC _____
FIRE _____

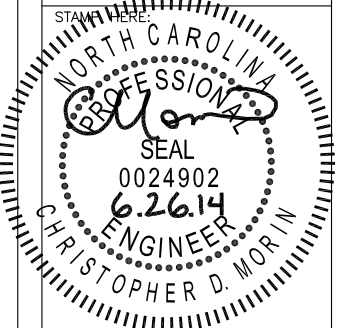
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SHEET REVISION			
NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

ATC SITE NUMBER:
275164
ATC SITE NAME:
MAC RAE PARK NC
SITE ADDRESS:
**4417 LAKE AVE.
WILMINGTON, NC 28409**



DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

**AT&T
ELECTRICAL
DETAILS**

SHEET NUMBER: REV. #

E-4

06-26-14 ARNOLD 16:17:51 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's Rev 3 2014-06-26/E5.dwg

NOTES:

1. ALL WIRE TO BE #12 THHN/THWN UNLESS NOTED OTHERWISE.
COLOR CODE:
AØ = BLACK
BØ = RED
NEUTRAL = WHITE
GROUND = GREEN
2. ALL WORK TO CONFORM TO 2011 N.E.C.
3. LABEL SERVICE DISCONNECT WITH A RED TAG.
4. SWITCH LEG CONDUCTORS SHALL BE THE SAME COLOR AS CIRCUIT CONDUCTORS.
5. PULL WIRES TO END OF FLEXIBLE NONMETALLIC CONDUIT & TAG.
6. PULL SEPARATE GROUND CONDUCTOR FOR EACH CIRCUIT.
7. WIRE SMOKE DETECTOR (ITEM 13) AS SHOWN ONLY IF 120 VOLT OPTION IS USED.)

SEE NOTES 5 & 6

CITY OF
WILMINGTON
NORTH CAROLINA
Public ServicesEngineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

DATE _____

NAME _____

PLANNING _____

TRAFFIC _____

FIRE _____

GFI RECEPTACLE

3 #13'S

B 95

B 94

B 94

B 92

B 92

B 90

B 80

B 79

B 79

B 79

B 79

B 79

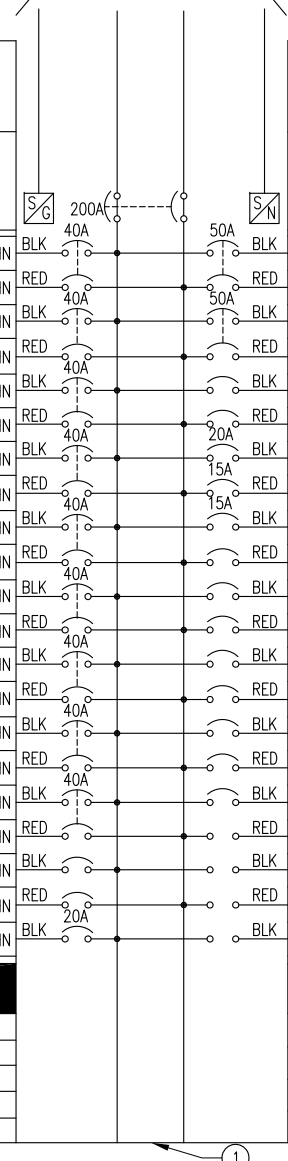
B 79

B 79

B 79

PANEL CIRCUIT AND LOAD SCHEDULE													
LOAD				LOAD PER PHASE (VA)			LOADS CONTINUOUS	LOADS NON-CONTINUOUS	TRIP	POLES	WIRE SIZE	A.I.C.	WIRE TYPE
	DESCRIPTION	QTY.	UNIT V.A.	PHASE									
				A	B	C							
1	RECTIFIER #1	1	1000	1000			X		40	2	8	10,000	THHN
3		1	1000		1000		X		40	2	8	10,000	THHN
5	RECTIFIER #2	1	1000	1000			X		40	2	8	10,000	THHN
7		1	1000		1000		X		40	2	8	10,000	THHN
9	RECTIFIER #3	1	1000	1000			X		40	2	8	10,000	THHN
11		1	1000		1000		X		40	2	8	10,000	THHN
13	RECTIFIER #4	1	1000	1000			X		40	2	8	10,000	THHN
15		1	1000		1000		X		40	2	8	10,000	THHN
17	RECTIFIER #5	1	1000	1000			X		40	2	8	10,000	THHN
19		1	1000		1000		X		40	2	8	10,000	THHN
21	RECTIFIER #6	1	1000	1000			X		40	2	8	10,000	THHN
23		1	1000		1000		X		40	2	8	10,000	THHN
25	RECTIFIER #7	1	1000	1000			X		40	2	8	10,000	THHN
27		1	1000		1000		X		40	2	8	10,000	THHN
29	RECTIFIER #8	1	1000	1000			X		40	2	8	10,000	THHN
31		1	1000		1000		X		40	2	8	10,000	THHN
33	RECTIFIER #9	1	1000	1000			X		40	2	8	10,000	THHN
35		1	1000		1000		X		40		8	10,000	THHN
37	RECTIFIER #10 (OPTIONAL)								40	2		10,000	THHN
39									40	2		10,000	THHN
41	EXTERIOR RECEPTACLE	2	180	360			X		20	1	12	10,000	THHN
			SUBTOTAL CONTINUOUS	9360	9000								
			SUBTOTAL NON-CONTINUOUS	—	—								
VOLTAGE: 120/240		CYCLE: 60			PHASE: 1			WIRES: 3					
NEUTRAL: 200 AMPS													
MAIN BREAKER: 200 AMP			FRAME			A.I.C. 10,000			TRIP: 200 AMPS				
MAIN LUGS: AMPS			MAIN COPPER BUS: 400 AMPS										
MAINS: TOP <input checked="" type="checkbox"/>		BOTTOM <input type="checkbox"/>											

SEE ELECTRICAL SCHEMATIC SHEET 7/E-5



SERVICE: 120/240 VAC														
DESIGNATION: N/A														
LOCATION: N/A														
WIRE TYPE	A.I.C.	WIRE SIZE	POLES	TRIP	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOAD PER PHASE (VA)			LOAD				
							PHASE			UNIT VA	QTY.	DESCRIPTION		
							A	B	C					
THHN	10,000	8	2	50	X		3340			3340	1	HVAC #1	2	
THHN	10,000	8	2	50	X					3340	1		4	
THHN	10,000	8	2	50	X					3340	1	HVAC #2	6	
THHN	10,000	8	2	50	X					3340	1		8	
THHN	10,000											SPACE	10	
THHN	10,000											SPACE	12	
THHN	10,000	12	1	20		X	1080					INTERIOR RECEPTACLE	14	
THHN	10,000	12	1	15		X		271				INTERIOR LIGHTS	15	
THHN	10,000	12	1	15		X	150					EXTERIOR LIGHTS	18	
THHN	10,000											RECTIFIER #11 (OPTIONAL)	20	
THHN	10,000												22	
THHN	10,000											RECTIFIER #12 (OPTIONAL)	24	
THHN	10,000												26	
THHN	10,000											RECTIFIER #13 (OPTIONAL)	28	
THHN	10,000												30	
THHN	10,000											RECTIFIER #14 (OPTIONAL)	32	
THHN	10,000												34	
THHN	10,000											RECTIFIER #15 (OPTIONAL)	36	
THHN	10,000												38	
THHN	10,000											RECTIFIER #16 (OPTIONAL)	40	
THHN	10,000												42	
							330	331		SUBTOTAL CONTINUOUS		TOTAL KVA CONTINUOUS x 1.25	23.78	
							6680	6680		SUBTOTAL NON-CONTINUOUS		TOTAL KVA NON-CONTINUOUS	13.38	
MANUFACTURER: INTERSECT														
TYPE AND CATALOG NUMBER:INTERSECT FB# 823-00023 AA1220061-3S														
NO EQUAL: <input checked="" type="checkbox"/> APPROVED EQUAL: <input type="checkbox"/>													TOTAL KVA	37.14
MOUNTING: SURFACE: <input checked="" type="checkbox"/> FLUSH: <input type="checkbox"/>													TOTAL AMPS	154.75

5 TON HVAC W/
5KW HEAT STRIP

MOTION DETECTOR

18 39



AMERICAN TOWER
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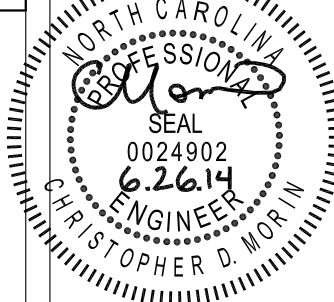
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E-5

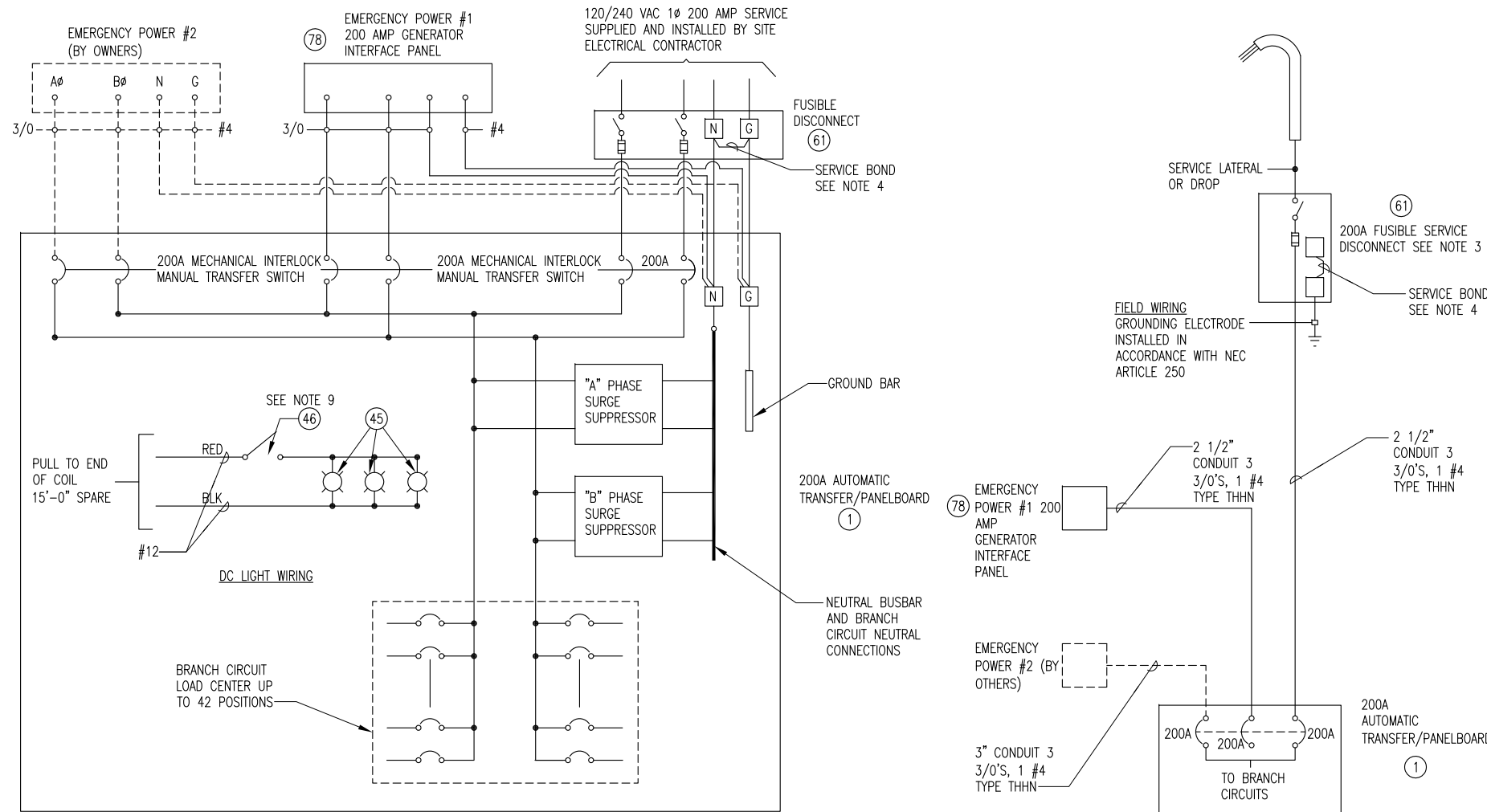
NOTES

- 11.SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 12.POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#4 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION; WITH OUTER JACKET. LISTED OR LABELED FOR THE LOCATION USED UNLESS OTHERWISE SPECIFIED.
- 13.ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C IF AVAILABLE).
- 14.RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- 15.ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 OFR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 16.ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- 17.GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- 18.RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OR OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- 19.LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

- 20.CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- 21.CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA UL, ANSI/IEEE, AND NEC.
- 22.WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA I (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 23.EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA I (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 24.METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS I; AND RATED NEMA I (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 25.NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA I (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 26.THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 27.THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

2

02-11-14 VICTOR GARCIA 10:43:22 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/E6.dwg



WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

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APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

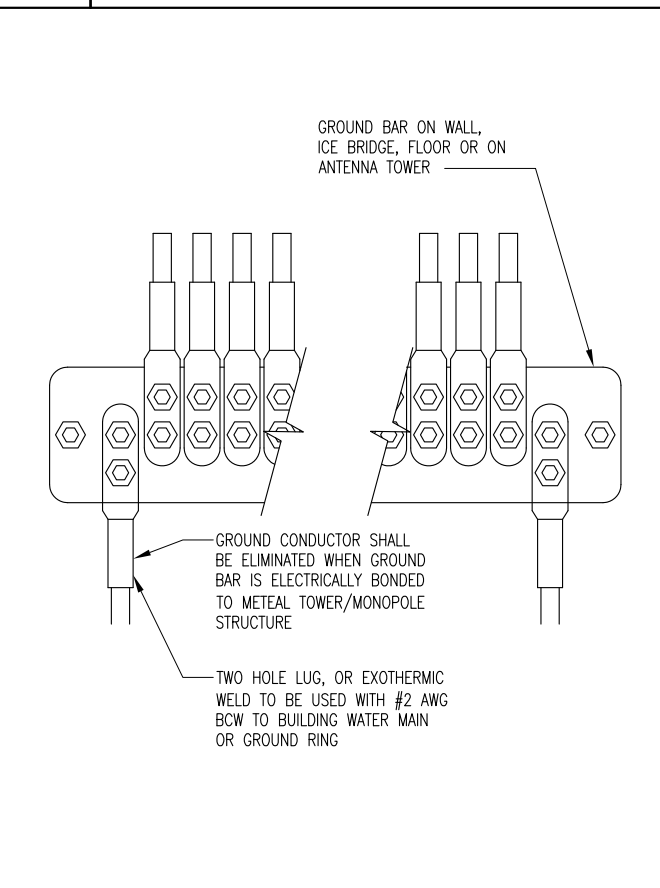
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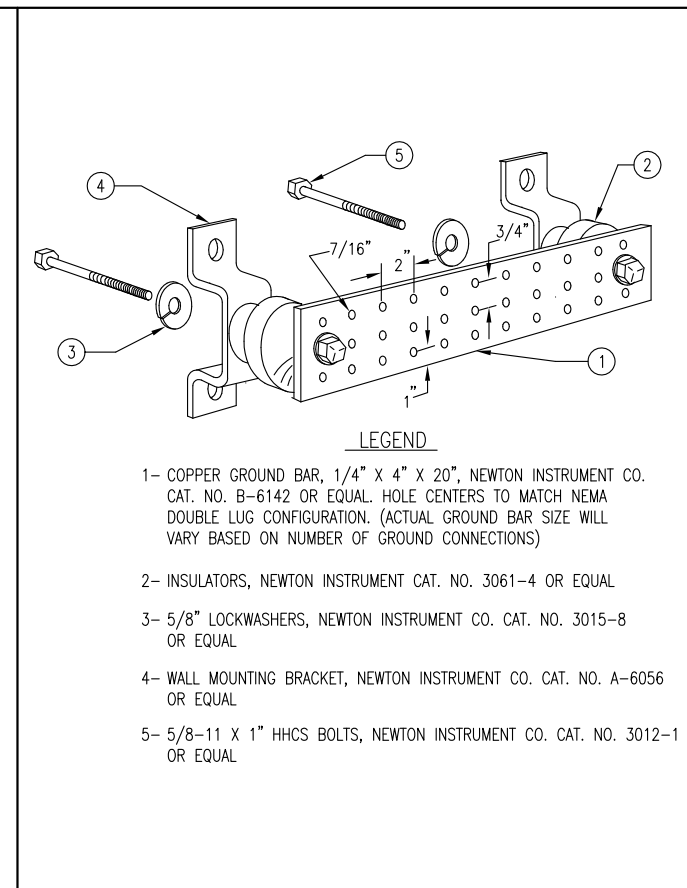
FIRE _____

- NOTES:
1. -----DASHED LINES DENOTE FIELD WORK.
 2. ALL CIRCUIT BREAKERS ARE 10,000 A.I.C. TYPICALLY. A.I.C. RATING MAY CHANGE AS ELECTRICAL SUPPLY DEMAND CHANGES.
 3. SERVICE BOND IS TO BE MADE BY DEVICES (STRAPS, SCREWS, ETC.) SUPPLIED BY EQUIP. MANUFACTURER. IF NO SUCH DEVICE IS SUPPLIED, BOND IS TO BE MADE WITH #4 AWG GREEN FOR 200 AMP. SERVICE AND 1/0 AWG GREEN FOR 400 AMP SERVICE.
 4. WHEN SERVICE OVERCURRENT DISCONNECT IS FIELD INSTALLED, A TEMPORARY SERVICE BOND WILL BE INSTALLED FOR SAFETY PURPOSE.
 5. INSTALL SERVICE BOND JUMPER AT SERVICE DISCONNECT.
 6. ALL CONDUCTORS SHALL BE TERMINATED WITH PROPERLY SIZED SOLDERLESS LUGS RATED FOR COPPER CABLE.
 7. NOT MORE THAN TWO LUGS SHALL BE TERMINATED ON A TERMINAL.
 8. USE TOP SWITCH ONLY.
 9. ALL CONDUIT SHALL BE EMT UNLESS OTHERWISE NOTED.
 10. ALL CONDUIT THROUGH WALL SHALL BE RIGID UNLESS OTHERWISE NOTED.

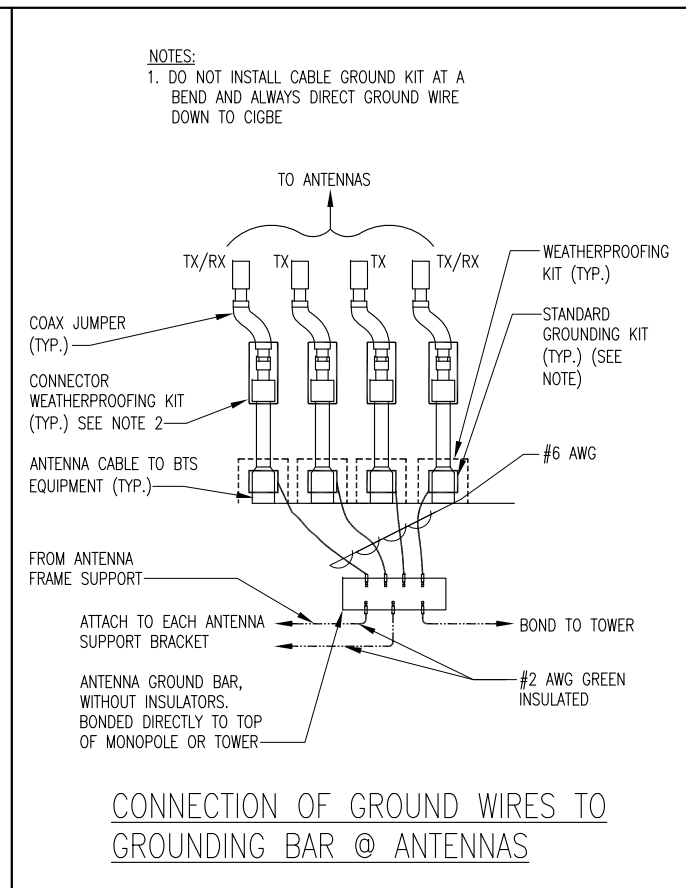
N.T.S. AT&T ELECTRICAL DIAGRAM 1



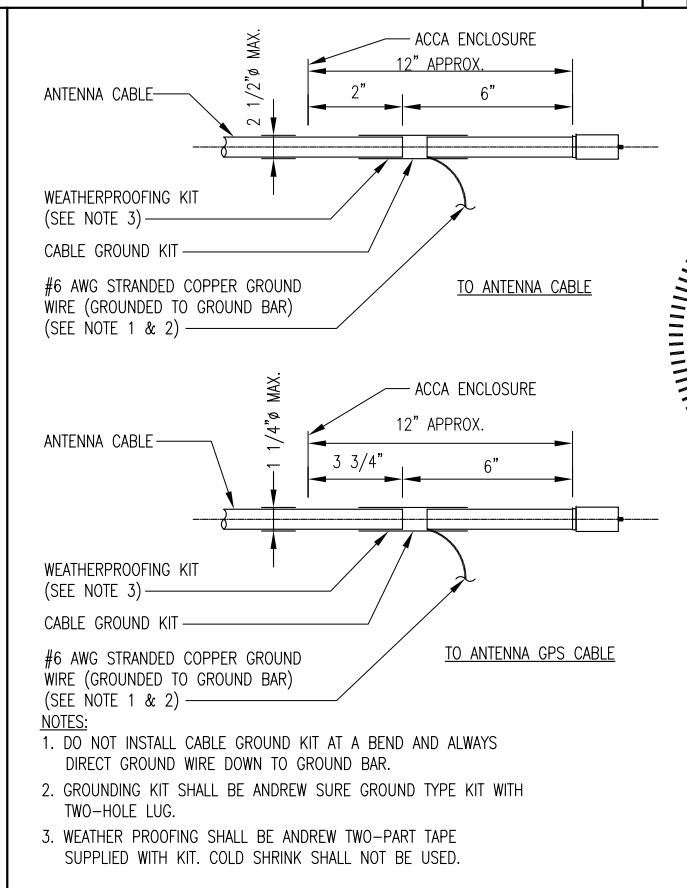
N.T.S. GRD. WIRE INSTALLATION TO GRD. BAR 2



N.T.S. GROUND BAR DETAIL 3



N.T.S. DETAIL 4



N.T.S. CABLE GROUND KIT CONNECTION 5

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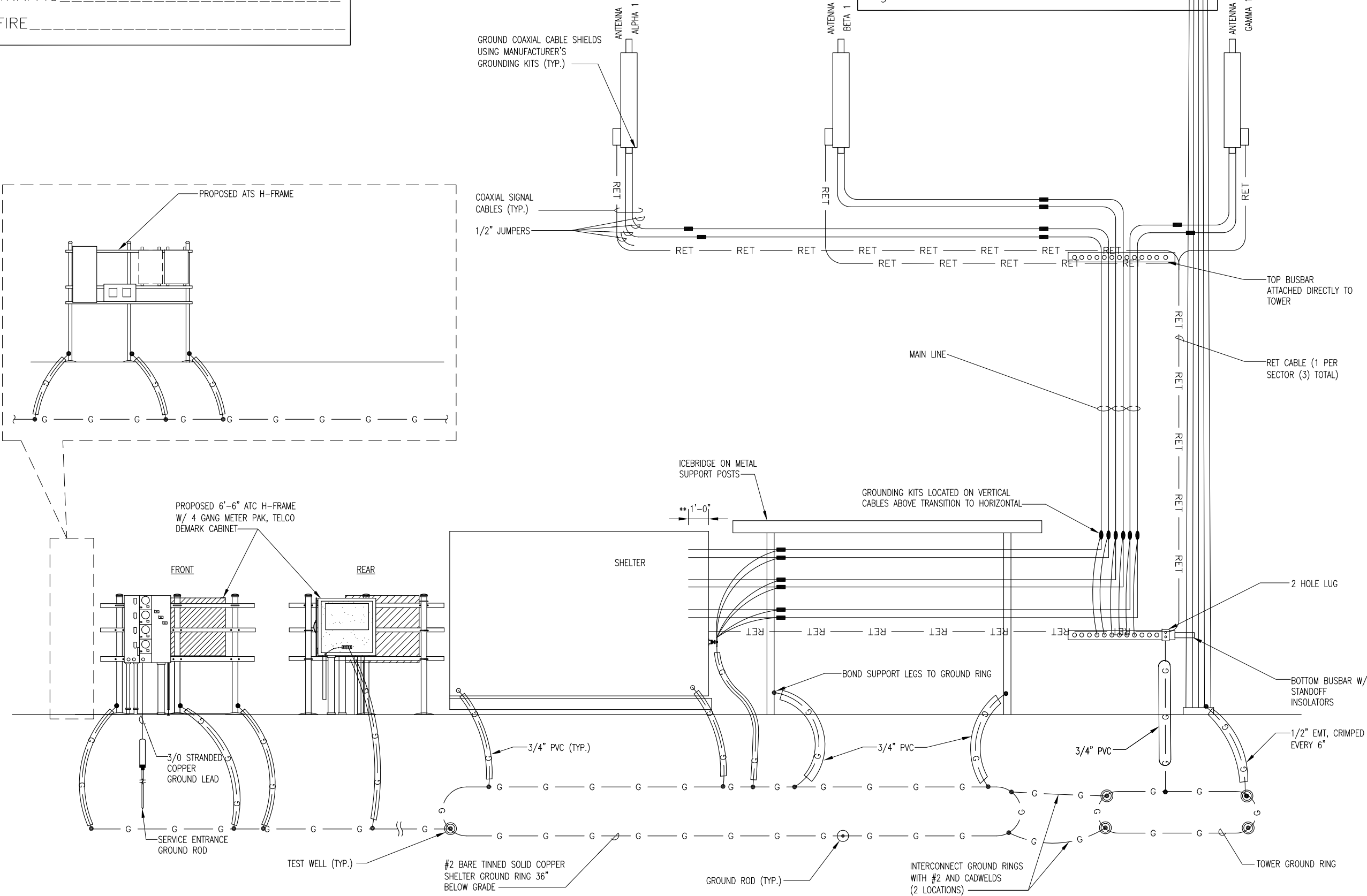
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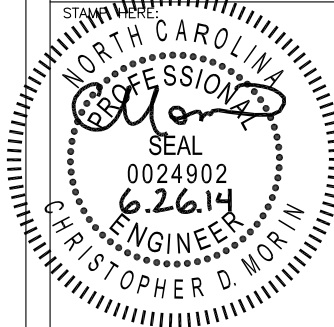
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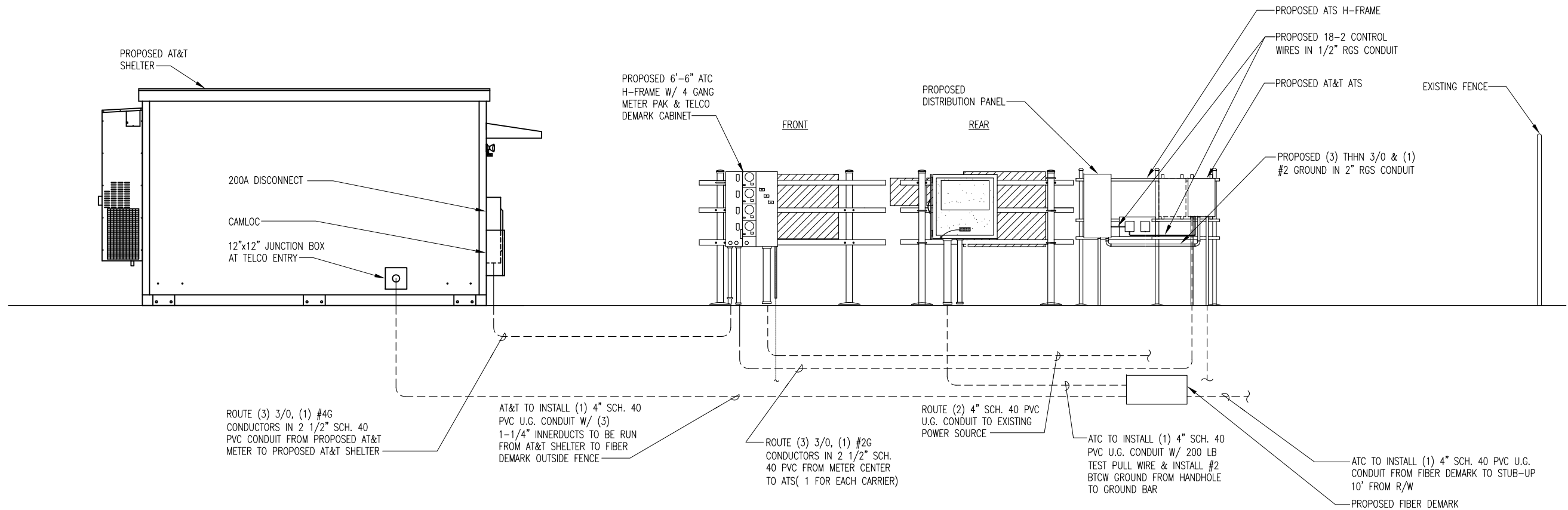
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E-7

N.T.S.

GROUNDING RISER DIAGRAM

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N.T.S.

PARTIAL POWER/TELCO RISER DIAGRAM FOR NEW EQUIPMENT

1

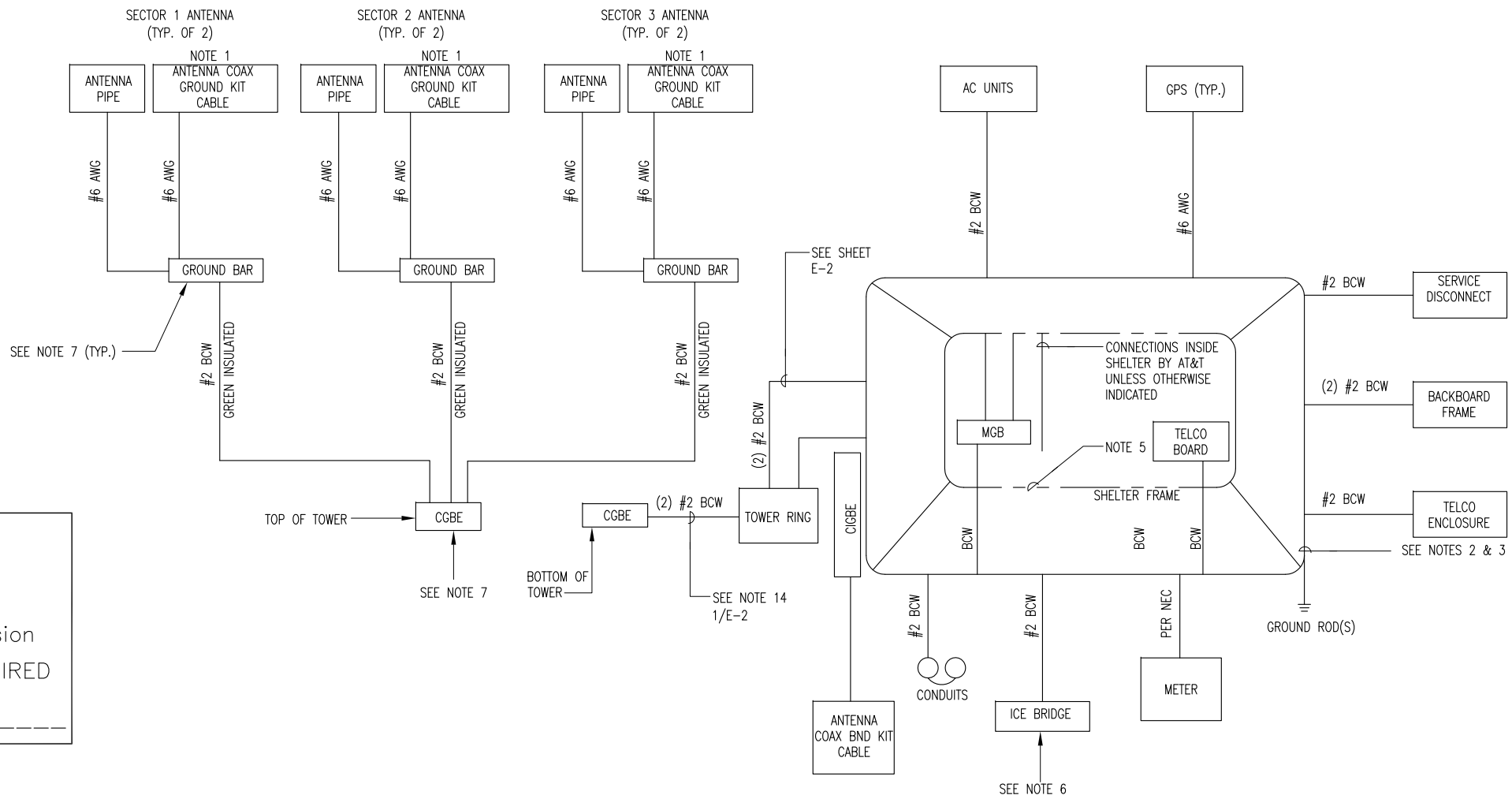
NOTES

1. BOND ANTENNA GROUNDING KIT CABLE TO GROUND BAR.
2. #2 (SOLID TINNED) BCW BURIED GROUND RING.
3. FOR GROUNDING CONNECTION & DETAILS, SEE LAYOUT DRAWINGS
4. INSTALL GROUND RODS AT LOCATIONS AS SHOWN ON GROUNDING PLAN.
5. INTERIOR GROUND RING FOR EQUIPMENT BY SHELTER MANUFACTURER.
6. ICE BRIDGE TO BE ISOLATED FROM TOWER MIN. OF 4".
7. BOND GROUND BAR TO TOWER.



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N.T.S.

SCHEMATIC DIAGRAM - GROUNDING SYSTEMS

2

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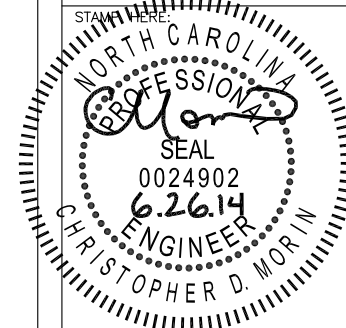


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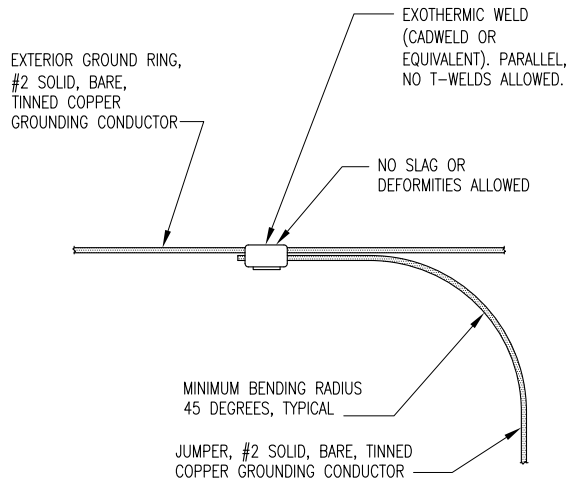
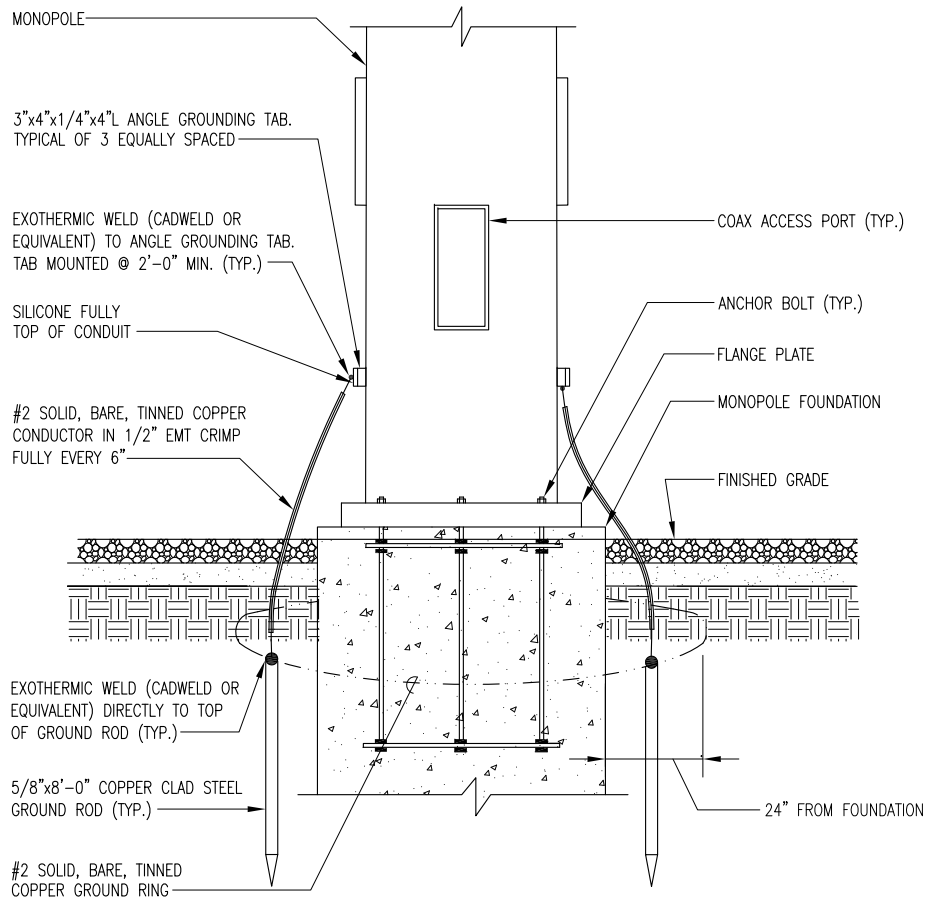
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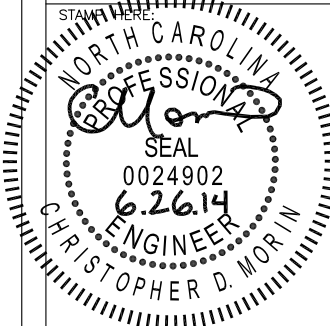
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DETAILS**

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NOTES:

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND PVC TO BE SCH 40. ALL OTHER UNDERGROUND PVC CONNECTIONS TO BE SCH 80.
2. ALL ABOVE GRADE PVC TO BE SCH 40. ALL CONNECTIONS TO BE SCH 40 PVC OR SEALTIGHT. VERIFY WITH CONSTRUCTION MANAGER PRIOR TO BID.
3. ALL WIRE CONNECTIONS & CONDUITS TO BE SUPPLIED BY CONTRACTOR UNLESS OTHERWISE NOTED OR SPECIFIED BY CONSTRUCTION MANAGER.
4. ALL AT&T CONDUITS SHALL TRANSITION BELOW GRADE AT ELBOW FROM PVC TO RGS ABOVE GRADE.
5. TELCO DEMARK CABINET SIZE MAY BE DETERMINED BY LOCAL TELCO PROVIDER.

PARTS LIST - O.F.C.I.			
ITEM	SPECIFICATION	DESCRIPTION	QTY.
①	SCH. 40	84" x 3.5" O.D. RIGID GALVANIZED PIPE	2
②	P1000 T	1 5/8" SLOTTED UNISTRUT CHANNEL	6
③		3-1/2" O.D. PIPE CAP	2
④		1/2 x 3-5/8 x 5" GALV. U-BOLT ASSY.	6
⑤		3/8" GALV. FLAT WASHER	12

1. INSTALL H- FRAME AS DETAILED IN EXHIBIT A- 1. THIS IS A STANDARD DRAWING & ELECTRICAL EQUIPMENT IS TO BE SQUARE "D" OR APPROVED EQUAL & MAIN BUSS RATING SHALL BE 600 AMPS. FINAL CONFIGURATION SHALL BE (4) 200 AMP METERS AVAILABLE. AN AREA OF 3' X 3' SHALL BE SET ASIDE ON THE H-FRAME FOR FUTURE LIGHTING CONTROLLER INSTALLATION.
2. INSTALL (2) 4" SCH 40 PVC CONDUITS FROM MAIN METER PAK TO POWER DEMARK LOCATION DETERMINED BY POWER COMPANY. CONTRACTOR SHALL INSTALL PULL- STRINGS IN EACH CONDUIT AS REQUIRED. DISTANCE NOT TO EXCEED 150'. MINIMUM DEPTH OF 48" AND CONTRACTOR SHALL INSTALL WIRE- REINFORCED WARNING TAPE 12" BELOW SURFACE.
3. INSTALL (1) 4" SCH 40 PVC CONDUIT FROM TELCO CABINET TO FIBER DEMARK LOCATION, DETERMINED BY LOCAL TELEPHONE SERVICE PROVIDER. CONTRACTOR SHALL INSTALL (1) 200# PULL- CORDS & #2 SOLID BCTW IN THE CONDUIT. DISTANCE NOT TO EXCEED 150'. MINIMUM DEPTH OF 36" AND CONTRACTOR SHALL INSTALL WIRE- REINFORCED WARNING TAPE 12" BELOW SURFACE.
4. CONNECT #2 SOLID TINNED COPPER TO H- FRAME POSTS VIA EXOTHERMIC WELD AND CONNECT #2 SOLID TINNED COPPER LEADS TO EXISTING GROUND RING FOR SITE AND TOWER VIA EXOTHERMIC WELD.
5. INSTALL SERVICE ENTRANCE GROUND ROD AT LOCATION WHERE MAIN TERMINAL BOX IS MOUNTED ON H- FRAME. PROVIDE INSPECTION WELL AT GROUND ROD LOCATION FOR INSPECTION REQUIREMENTS.
6. LABEL METER CENTERS PER POWER COMPANY REQUIREMENTS. IF NO REQUIREMENTS, LABEL EACH SLOT STARTING FROM TOP SLOT "A"1D, "B", & "C". :LABELS SHALL BE ULTRA- VIOLET RESISTANT. METER "A" SHALL BE RESERVED FOR AT&T. METER SHALL ALSO HAVE A LABEL STATING "AT&T".

UTILITY SCOPE OF WORK

APPROVED CONSTRUCTION PLAN

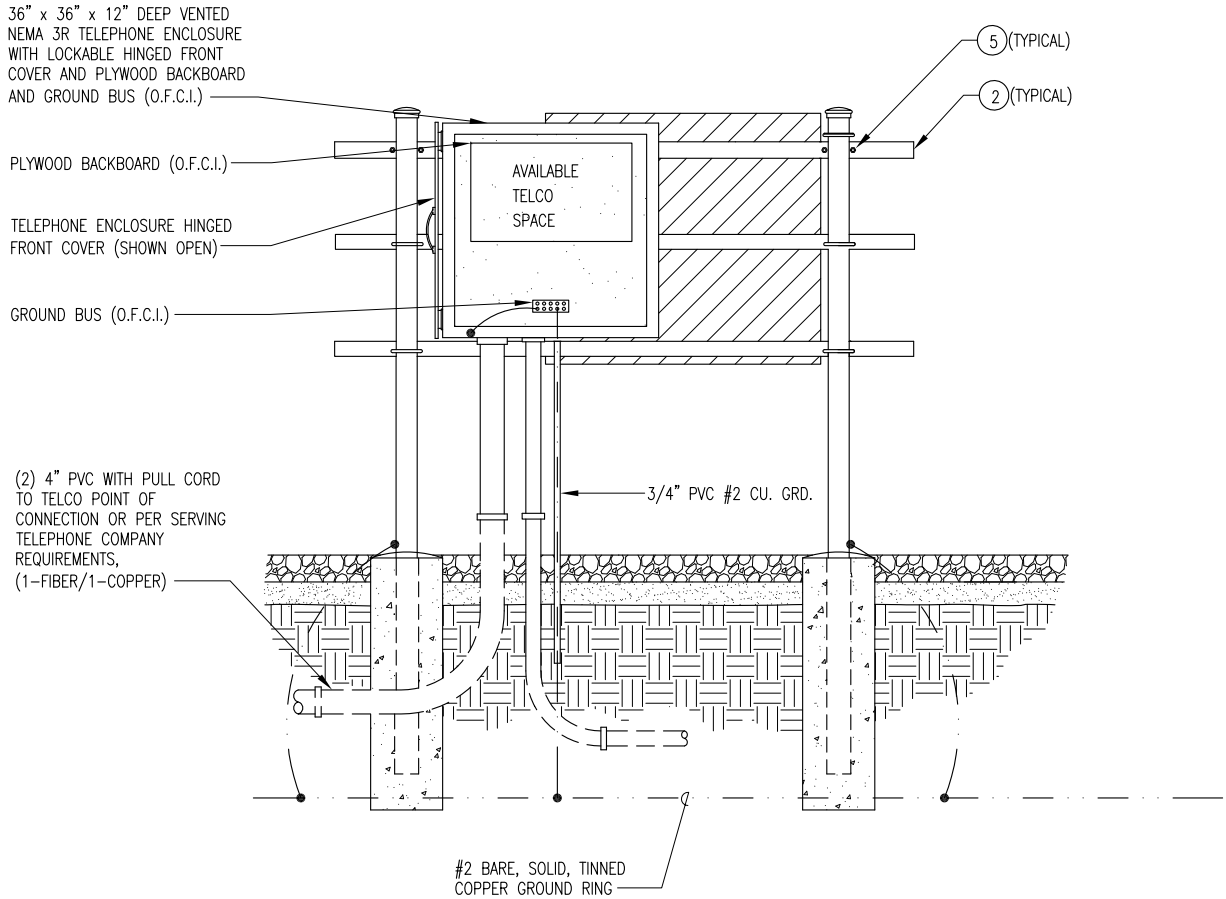
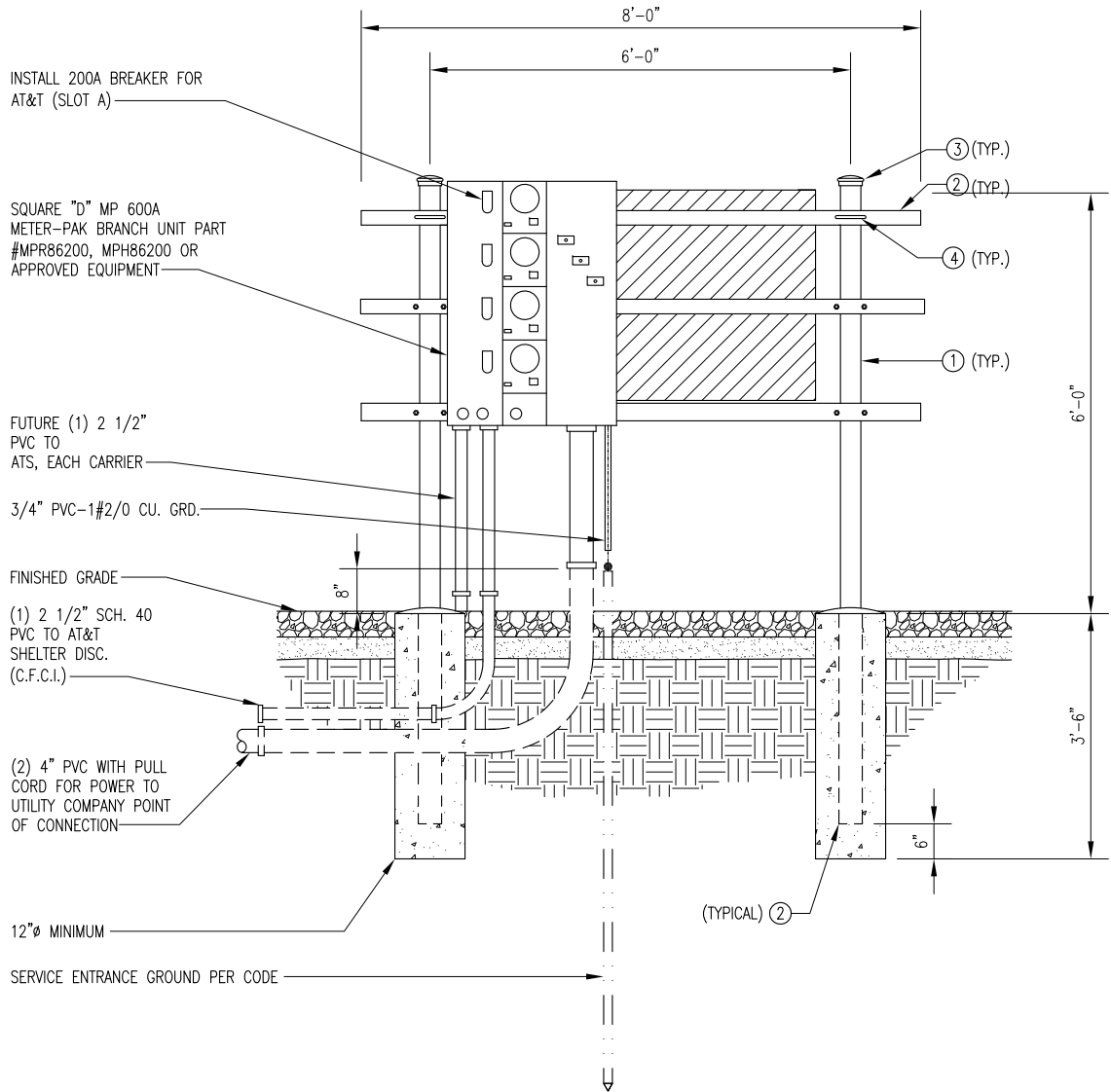
NAME _____ DATE _____

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Public ServicesEngineering Division
APPROVED PLAN - NO PERMIT REQUIRED

Signed: _____



AMERICAN TOWER CORPORATION

496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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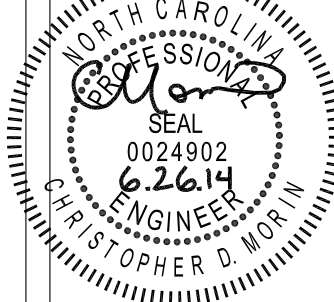
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WILMINGTON, NC 28409

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SHEET TITLE:

ELECTRICAL
DETAILS
AND NOTES

SHEET NUMBER: REV. #

E-10











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UTILITY SERVICE H-FRAME - FRONT AND REAR ELEVATIONS

1

SYMBOLS LIST

(SYMBOLS SHOWN MAY NOT BE USED ON THIS PROJECT)

-  CONDUIT RISER UP.
-  CONDUIT RISER DOWN.
-  GROUNDING CONDUCTOR.
-  INDICATES CIRCUIT CONTINUATION.
-  ENCLOSED CIRCUIT BREAKER. SIZE AS SHOWN.
-  FUSED DISCONNECT SWITCH. SIZE AS SHOWN.
-  RECEPTACLE PANELBOARD, 120/240 VOLT.
-  NOTES: REFERENCE SYMBOLS:
DENOTES "SEE NOTE NO. 1."
-  +18" INDICATES MOUNTING HEIGHT AFF.
-  EXISTING ELEC EQUIPMENT TO REMAIN.

ABBREVIATIONS

A, AMP	AMPERE	KVA	KILOVOLT AMPS
AFF	ABOVE FINISHED FLOOR	KWH	KILOWATT HOURS
AN	ANTENNA	L	LENGTH
AWG	AMERICAN GAUGE WIRE	LB	POUND
		MAX	MAXIMUM
		M.L.O.	MAIN LUG ONLY
C	CONDUIT	N	NEUTRAL
CAB	CABINET	NEC	NATIONAL
C/B	CIRCUIT BREAKER		ELECTRICAL CODE
CKT	CIRCUIT	NO.	NUMBER
COAX	COAXIAL	NTS	NOT TO SCALE
CO	COMPANY	O.C.	ON CENTER
CONTR	CONTRACTOR	P	POLE
D	DEPTH		
db	DECIBEL	R.G.S.	RIGID
DEG	DEGREE		GALVANIZED
DESCRIP	DESCRIPTION		STEEL
DIA	DIAMETER	SCH	SCHEDULE
DWG	DRAWING	SWBD	SWITCHBOARD
ECB	ENCLOSED CIRCUIT BREAKER	TEL (TYP)	TELEPHONE TYPICAL
ELEC	ELECTRICAL	UL	UNDERWRITER'S LABORATORY
(E)	EXISTING	V	VOLT
FT	FEET	W	WIDTH OR WIRE
G	GROUND		
IN	INCH	XFMR	TRANSFORMER

ELECTRICAL SPECIFICATION

- FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT SERVICES FOR ALL ELECTRICAL WORK AS INDICATED IN ACCORD WITH PROVISIONS OF CONTRACT DOCUMENTS. COORDINATE WITH WORK OF ALL OTHER TRADES. FURNISH AND INSTALL ALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS AND DEVICES TO SECURE AND COMPLETE INSTALLATION.
- FOR EXACT LOCATIONS OF BUILDING ELEMENTS, REFER TO ARCHITECTURAL DWG'S. FIELD VERIFY LOCATIONS AND ARRANGEMENT OF ALL EXISTING SYSTEMS AND EQUIPMENT.
- ALL EXTERIOR DEVICES AND EQUIPMENT SHALL BE WEATHERPROOF, NEMA-3R.
- PERFORM ALL WORK IN ACCORD WITH FOLLOWING CODES:
 - FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES.
 - NATIONAL ELECTRICAL CODE (NEC), 2011 EDITION.
 - ALL AUTHORITIES HAVING JURISDICTION.
- USE UL LABELED ELECTRICAL MATERIALS WHERE LISTING HAS BEEN ESTABLISHED FOR MATERIALS OR DEVICES IN QUESTION.
- SAFETY SWITCH: HEAVY DUTY TYPE IN NEMA-1 ENCLOSURE, NEMA-3R IN DAMP OR WET LOCATIONS.
- CONDUIT: ALL ELECTRIC METALLIC TUBING CONNECTORS SHALL BE COMPRESSION TYPE (NO POT-METAL AND SET SCREW), MIN. 3/4". USE FLEXIBLE METAL (STEEL) CONDUIT FOR CONNECTION TO ALL VIBRATING EQUIPMENT AND CASEWORK.
- WIRE IN CONDUIT SIZES #10 AWG AND SMALLER SHALL BE SOLID COPPER WITH TYPE THWN/THHN 600 VOLT INSULATION. THE MIN. CONDUCTOR SIZE SHALL BE NO. 12 AWG. CONTROL WIRING MAY BE NO. 14 AWG. A GROUND WIRE SHALL BE INSTALLED IN ALL CIRCUITS. WIRE OF SIZES 8 AWG AND LARGER SHALL BE STRANDED COPPER WITH TYPE XHHW, THW OR THHN 600 VOLT INSULATION. SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE CONICAL SPRING TYPE DEVICES. WIRE SIZES OF #8 AWG AND LARGER SHALL HAVE SPLIT-BOLT CONNECTORS WITH SUFFICIENT LAYERS OF TAPE TO EQUAL INSULATION OF WIRE BEING SPLICED.
- PROVIDE NAMEPLATES ON ALL PIECES OF ELECTRICAL EQUIPMENT, SUCH AS, CIRCUIT BREAKERS, DISCONNECT SWITCHES, PANELBOARDS, ALL PULL BOXES. NAMEPLATES SHALL BE ENGRAVED WITH WHITE LETTERS ON A BLUE FIELD, 2-1/2"x3/4" WITH 1/4" HIGH (MIN.) LETTERS. PLATE MATERIAL SHALL BE TOUGH MULTI-LAYERED ACRYLIC (1/8" THICK MIN.) "SETONFLEX" TO WITHSTAND EXTREME INDOOR AND OUTDOOR TEMPERATURES. PLATE SHALL HAVE PRESSURE SENSITIVE ADHESIVE BACKING SUITABLE FOR OUTDOORS.
- THE EQUIPMENT SHALL BE PROVIDED BY AS A PREFABRICATED PACKAGED UNIT. THE CONTRACTOR IS TO PROVIDE ALL OTHER EQUIPMENT, CONDUIT AND CABLING FOR A COMPLETE JOB.
- ALL TERMINATIONS SHALL BE LISTED AND IDENTIFIED FOR USE WITH 75°C RATED CONDUCTORS.
- POWER COMPANY OR THE CONTRACTOR WHERE REQUIRED BY THE POWER COMPANY, SHALL TERMINATE THE POWER CABLES (SUPPLIED BY THE POWER CO.) AT THE UTILITY METER.
- CONDUIT LINES SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE SHELTER TO THE PROPERTY LINE SO THAT WATER WILL FLOW AWAY FROM THE SHELTER. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUITS ARE LAID SO THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTRUCTIONS. MANUFACTURED BENDS SHALL HAVE A MIN. RAD. 36" FOR CONDUITS.
- BENDS SHALL HAVE A MINIMUM RADIUS 36" FOR CONDUITS. ALL CONDUITS ENTERING THE SHELTER SHALL BE SEALED WITH SEALANTS THAT ARE IDENTIFIED FOR USE WITH THE CABLE INSULATION, SHIELD, OR OTHER COMPONENTS. A BEAD OF SILICONE SHALL BE PLACED AROUND ALL CONDUIT PENETRATIONS INTO THE SHELTER.

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- METER SOCKET TO BE SUPPLIED BY OR AS PER POWER COMPANY REQUIREMENTS.
- GROUND FAULT PROTECTION IS REQUIRED FOR ANY UTILITY RECEPTACLES.
- WHITE/NEUTRAL, GREEN/GROUND, SHALL BE MAINTAINED THROUGHOUT THE SITE ELECTRICAL SYSTEM.

CABLE WORKS GENERAL NOTES

- ALL COAX CABLE SHALL BE INSTALLED WITH A "DRIP LOOP" WHEN TURNING FROM VERTICAL TO HORIZONTAL. JUMPER LENGTH SHALL NOT EXCEED 6' ON EACH SIDE OF FEEDER.
- ALL COAX CABLES SHALL BE RFS CELLFLEX SERIES. ALL CONNECTORS TO BE 7/16 DIN FEMALE CAPTIVATED. ALL JUMPERS SHALL BE LCF SERIES (NO SUPERFLEX) 7/16 MALE DIN TO 7/16 MALE DIN AND SHALL BE 6' LONG MAX. (UNLESS IMPOSSIBLE). ALL EXTERIOR CONNECTIONS SHALL BE WATERPROOF TAPED
- ALL ANTENNA MOUNTS MUST BE GROUNDED. ALL COAX FEEDER CABLE MUST BE GROUNDED WITHIN 10' MAX. (PREFERRED WITH 2"-0") OF CONNECTOR. PROVIDE GROUND BAR AT EACH SECTOR. GRIPSTRUT SHALL BE GROUNDED AT EQUIPMENT END AND ANTENNA END TO GROUND BARS. GRIPSTRUT SHALL BE JUMPED BETWEEN SECTIONS. PROVIDE GROUND KIT AT SHELTER.
- FOR MONOPOLES - ALL CABLES SHALL RUN ON INSIDE OF MONOPOLE, CABLE LADDER OR STANDOFFS. PROVIDE CABLE SUPPORTS EVERY 4' FOR 1-5/8" CABLE; EVERY 4' FOR 7/8" CABLE. GROUNDING AS FOLLOWS:
 - KIT AT TOP PRIOR TO TURN DOWN
 - KIT AT BOTTOM BEFORE HORIZONTAL TURN
 - KIT AT EQUIPMENT
 - BOND ICEBRIDGE (TOWER AND EQUIPMENT SIDE)
- ALL SHELTER & ASSOCIATED EQUIPMENT SHALL BE GROUNDED BY EQUIPMENT MANUFACTURER REPRESENTATIVE.

GENERAL NOTES TO ELECTRICAL CONTRACTOR

- THE CONTRACTOR SHALL PROVIDE (FURNISH AND INSTALL) ALL NECESSARY CONDUITS, WIRING AND OUTLET BOXES TO SUPPORT THE AMERICAN TOWER FURNISHED ITEMS.
- PROVIDE WIRING IN CONDUIT IN ACCORDANCE WITH MANUFACTURER'S RECOM-MENDATION AND N.E.C.
- FOR LOCATION OF NEW EQUIPMENT & ANTENNAS. SEE ARCHITECTURAL DWG'S.
- COORDINATE IN ADVANCE ALL WORK TO BE DONE WITH POWER UTILITY CO.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL CONNECTIONS AND MAKING A COMPLETE OPERATIONAL SYSTEM AS APPROVED BY AMERICAN TOWER REPRESENTATIVE.
- THE CONTRACTOR SHALL CONFER, COORDINATE, AND COMPLY WITH RECOMMENDATIONS MADE BY THE NEW EQUIPMENT MANUFACTURER'S REPRESENTATIVE
- ELECTRICAL CONTRACTOR TO INCLUDE THE FINAL CONNECTION WORK AND REQUIRED PERMITTING AND INSPECTIONS TO COMPLETE THE POWER AND TELEPHONE CON-NECTION TO EQUIPMENT SHELTER. COORDINATE WITH THE GENERAL CONTRACTOR FOR EQUIPMENT SHELTER.
- PRIOR TO ANY WORK OR ORDERING OF ANY MATERIALS, THE CONTRACTOR SHALL VERIFY THAT THE EXISTING SERVICE VOLTAGE IS THE SAME VOLTAGE AS SHOWN FOR THE NEW EQUIPMENT. IF THE VOLTAGES ARE THE SAME THE CONTRACTOR MAY PROCEED, IF DIFFERENT, THE CONTRACTOR SHALL NOTIFY AMERICAN TOWER MANAGER IMMEDIATELY AND OBTAIN FURTHER DIRECTION.








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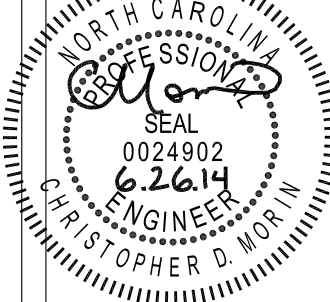
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ELECTRICAL NOTES

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E-11

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SD050

CUSTOM MODEL

GENERAC

INDUSTRIAL POWER

Industrial Diesel Generator Set

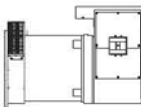
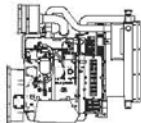
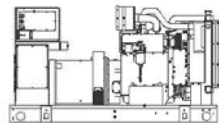
EPA Emissions Certification: Tier III

50 kW Diesel

1 of 5

Standby Power Rating

50KW 60 Hz



features

benefits

Generator Set

- PROTOTYPE & TORSIONALLY TESTED
 - UL2200 TESTED
 - RHINOCOAT PAINT SYSTEM
 - SOUND LEVEL 2 ENCLOSURE
- ▶ PROVIDES A PROVEN UNIT
 - ▶ ENSURES A QUALITY PRODUCT
 - ▶ IMPROVES RESISTANCE TO ELEMENTS
 - ▶ 71dbA @ 7 METERS (23FT)

Engine

- EPA TIER CERTIFIED
 - INDUSTRIAL TESTED, GENERAC APPROVED
 - POWER-MATCHED OUTPUT
 - INDUSTRIAL GRADE
- ▶ ENVIRONMENTALLY FRIENDLY
 - ▶ ENSURES INDUSTRIAL STANDARDS
 - ▶ ENGINEERED FOR PERFORMANCE
 - ▶ IMPROVES LONGEVITY AND RELIABILITY

Alternator

- TWO-THIRDS PITCH
 - LAYER WOUND ROTOR & STATOR
 - CLASS H MATERIALS
 - DIGITAL 3-PHASE VOLTAGE CONTROL
- ▶ ELIMINATES HARMFUL 3RD HARMONIC
 - ▶ IMPROVES COOLING
 - ▶ HEAT TOLERANT DESIGN
 - ▶ FAST AND ACCURATE RESPONSE

Controls

- ENCAPSULATED BOARD W/ SEALED HARNESS
 - 4-20mA VOLTAGE-TO-CURRENT SENSORS
 - SURFACE-MOUNT TECHNOLOGY
 - ADVANCED DIAGNOSTICS & COMMUNICATIONS
- ▶ EASY, AFFORDABLE REPLACEMENT
 - ▶ NOISE RESISTANT 24/7 MONITORING
 - ▶ PROVIDES VIBRATION RESISTANCE
 - ▶ HARDENED RELIABILITY

primary codes and standards



SD050

application and engineering data

ENGINE SPECIFICATIONS

General

Make	Iveco / FPT
EPA Emissions Compliance	Tier III
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	4
Type	Diesel
Displacement - L (cu. in.)	4.5 (274)
Bore - mm (in.)	105 (4.1)
Stroke - mm (in.)	132 (5.2)
Compression Ratio	17.5:1
Intake Air Method	Turbocharged
Cylinder Head Type	2 Valve
Piston Type	Aluminum
Crankshaft Type	Forged Steel
Engine Block Type	Cast Iron / Wet Sleeve

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	+/- 0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (gal)(qts)	13.6 (3.6) (14.4)

Cooling System

Cooling System Type	Closed
Water Pump	Belt Driven Centrifugal
Fan Type	Pusher
Fan Blade Number	2538 (10)
Fan Diameter (in.)	26
Coolant Heater Wattage	1500
Coolant Heater Standard Voltage	120

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (microns)	5
Fuel Inject Pump Make	Standyne
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	1/4 inch Npt
Fuel Return Line - mm (in.)	1/4 inch Npt

Engine Electrical System

System Voltage	12VDC
Battery Charging Alternator	90 Amp
Battery Size (at 0 oC)	Optima Redtop
Battery Group	34
Battery Voltage	12VC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	390
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	< 3.5%
Telephone Interference Factor (TIF)	< 50
Standard Excitation	PMG
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Load Capacity - Prime	100%
Prototype Short Circuit Test	Y

Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	+/- 0.25%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A.5
ISO 3046
BS5514
SAE J1349
DIN6271
IEEE C62.41 TESTING
NEMA ICS 1

Rating Definitions:

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. Max load factor 70%
Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. Max load factor 80%
10% overload capacity is available for 1 hour of every 12 hours.

APPROVED CONSTRUCTION PLAN

NAME

DATE

PLANNING

TRAFFIC

FIRE

CITY OF WILMINGTON

NORTH CAROLINA

Public Services Engineering Division

APPROVED PLAN - NO PERMIT REQUIRED

Signed:

50 kW Diesel

2 of 5

AMERICAN TOWER CORPORATION

496 LONG POINT ROAD

MOUNT PLEASANT, SC 29464

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FAX: (843) 971-8889

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PROPOSED 50KW

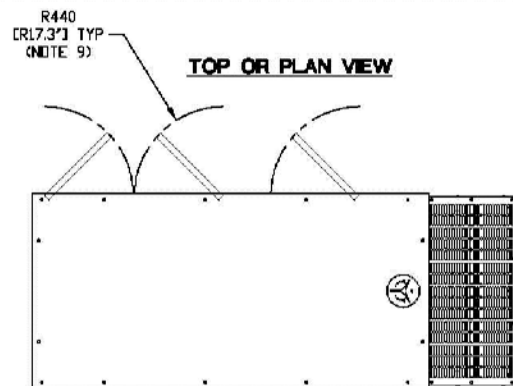
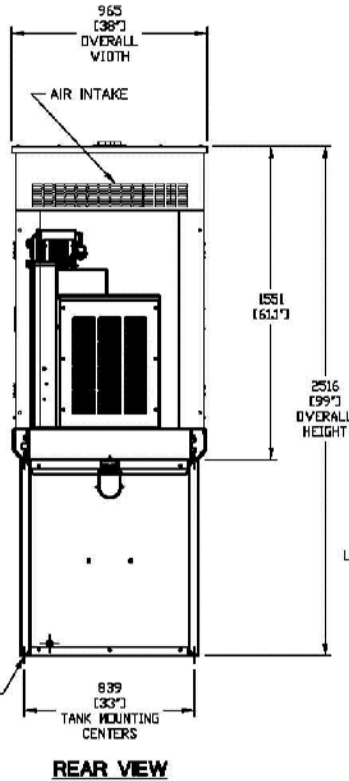
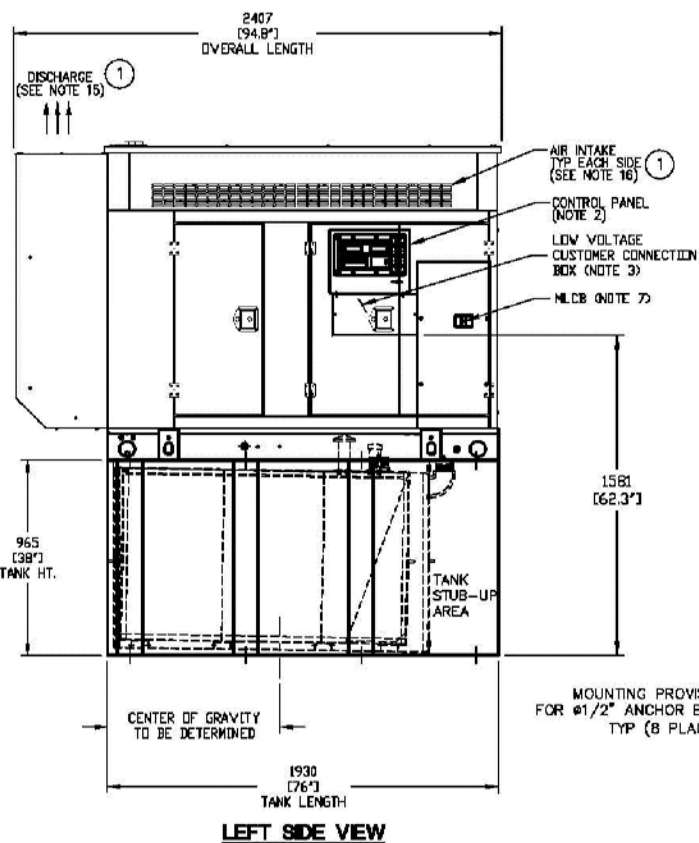
GENERATOR

DETAILS

SHEET NUMBER:	REV. #
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GEN-1

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RECOMMENDED ELECTRICAL SUB-UPS (SEE TOP VIEW)	
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT GLAND AREA	A
1) LOW VOLTAGE CUSTOMER CONNECTION BOX FOR 120VAC (FCI OUTLET, (STANDARD BLOCK HEATER, BATTERY CHARGER AND OTHER 120 VAC OPTIONS).	B
2) TRANSFER SWITCH/ COMMUNICATION CONDUITS. COMMUNICATIONS AND 2-WIRE START MUST NOT BE RUN IN CONDUIT WITH AC WIRING.	SEE NOTE 3

- NOTES:**
1. THE LEFT SIDE OF THE GENERATOR IS SERVICE ACCESSIBLE.
 2. 10 AMP BATTERY CHARGER ENCLOSED WITHIN CONTROL PANEL.
 3. CONNECTION POINTS FOR CONTROL WIRES. BOTTOM OF LOW VOLTAGE CUSTOMER CONNECTION BOX HAS KNOCKOUTS FOR 1/2" AND 3/4" CONDUIT FITTINGS.
 4. GENERATOR MUST BE GROUNDED.
 5. 12 VOLT NEGATIVE GROUND SYSTEM.
 6. OPTIONAL REMOTE EMERGENCY STOP SHIPPED LOOSE WITH GENERATOR.
 7. MAIN LINE CIRCUIT BREAKER (MLCB), AC LOAD LEAD CONNECTION AND AUXILIARY 120/240V CONNECTION.
 8. LEVEL 2A SOUND ATTENUATED ENCLOSURE STANDARD WITH GENERATOR.
 9. DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED.
DOORS ARE LOCATED ON THE LEFT SIDE OF THE GENERATOR ONLY.
 10. STUB-UPS: BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
 11. 'A' IS THE STUB UP AREA FOR THE MLCB AND NEUTRAL CONNECTION.
 12. SEE DRAWING 0C3850 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER.
 13. 120VAC ENGINE BLOCK HEATER.
 14. 210 GALLON USEABLE CAPACITY BASE TANK STANDARD WITH GENERATOR.
 15. MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
 16. MUST ALLOW FREE FLOW OF INTAKE AIR. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
 17. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS.

WEIGHT DATA (INCLUDES WOODEN SHIPPING SKID)
ENCLOSED GENERATOR WITH EMPTY FUEL TANK - TO BE DETERMINED

UNITS: mm [INCHES]

© GENERAL POWER SYSTEMS 2001

INSTALLATION D4.5L G17 50KW
ENCLOSED LEVEL 2A

**GENERAC POWER
SYSTEMS**
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

FILE NAME	0J2534.DWG	SIZE	B
SCALE	NTS	FIRST USE	AT&T
DWG NO.	0J2534	REV	1

The logo for the City of Wilmington, North Carolina, features a large, stylized 'W' with the words 'CITY OF' and 'WILMINGTON' integrated into it. Below the 'W' is a blue wavy line representing water. To the right of the 'W' is the word 'NORTH CAROLINA' in a smaller, sans-serif font.

APPROVED CONSTRUCTION PLAN

NAME _____ DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____



AMERICAN TOWER®
CORPORATION

496 LONG POINT ROAD
MOUNT PLEASANT, SC 29464
TEL.: (843) 971-8385
FAX: (843) 971-8889

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BC

a r c h i t e c t s
e n g i n e e r s

5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
FAX: (703) 671-6300

SHEET REVISION		
DESCRIPTION	BY	DATE

1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____

ATC SITE NUMBER:
275164

ATC SITE NAME:

MAC RAE PARK
NC

SITE ADDRESS:
4417 LAKE AVE.
WILMINGTON, NC 28409

STAMP HERE:

DRAWN BY:	AGT
CHECKED BY:	DRS
DATE DRAWN:	03-24-14
SUBMISSION:	FINAL CD'S

SHEET TITLE:

PROPOSED 50KW GENERATOR DETAILS

SHEET NUMBER:	REV.
---------------	------

GEN-3

50KW GENERATOR INSTALLATION DRAWING

1

03-24-14 ARNOLD 10:07:33 Y:/Drawings - 2013/ATC/Mac Rae Park NC - 275164/_CD's_2014.02.10/GEN4.dwg



Public Services Engineering Division
APPROVED PLAN – NO PERMIT REQUIRED

Signed: _____

APPROVED CONSTRUCTION PLAN

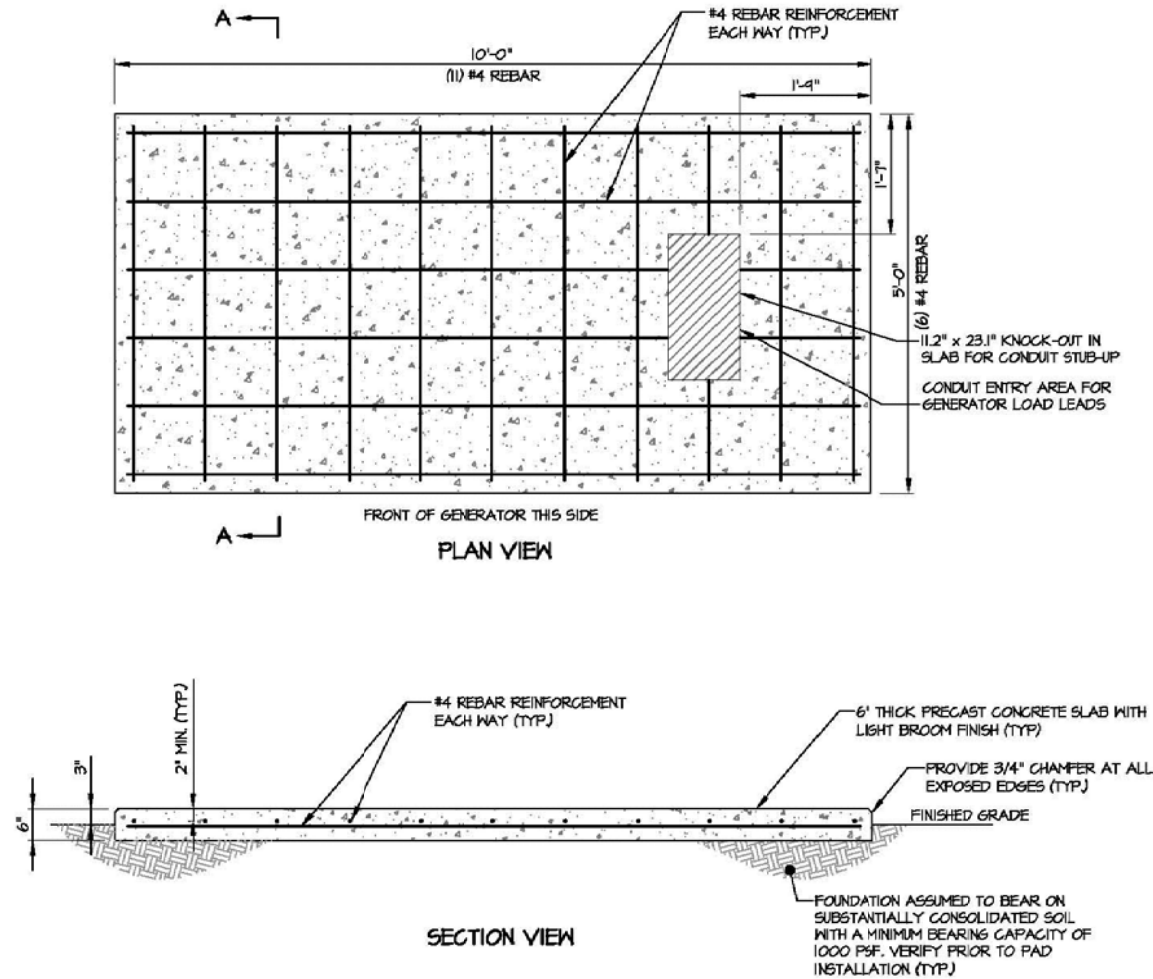
NAME _____

DATE _____

PLANNING _____

TRAFFIC _____

FIRE _____



MONOLITHIC GENERATOR SLAB DETAIL
NOT TO SCALE

LIFTING NOTE:
THE CONTRACTOR SHALL COORDINATE
THE INSTALLATION OF EMBEDDED
HOISTING HOOKS OR REBAR AS
REQUIRED PRIOR TO FABRICATION.

REINFORCED CONCRETE NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- SITECAST CONCRETE FOR SLABS AND POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.

SLUMP - 4" MIN. / 6" MAX.
AIR ENTRAINMENT - 2% TO 3% BY VOLUME

CLASSES OF CONCRETE

CLASS	28 DAY STRENGTH (PSI)	MAX WATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE I	3000	0.55	SLABS & FOOTINGS	NORMAL WEIGHT
TYPE III	5000	0.45	SLABS & FOOTINGS	HIGH EARLY STRENGTH

* IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE III HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8 INCHES, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH.....3"
CONCRETE EXPOSED TO EARTH OR WEATHER
#6 AND LARGER2"
#5 AND SMALLER & W.W.F.....1-1/2"
- MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4".
- INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION.
- MECHANICAL VIBRATION IS REQUIRED ON ALL SLABS TO REDUCE THE HONEYCOMB EFFECT UNLESS DIRECTED BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.

PMA
30 MANSSELL CT
SUITE 100
ROSWELL, GA 30076
678-280-2325



NUM	DATE	DESCRIPTION:
A	06/26/13	ISSUED FOR REVIEW
B	07/01/13	REVISED PER COMMENTS
C	07/10/13	REVISED PER TOWER OWNER COMMENTS

OT2-297 / BLACK CREEK
GENERATOR
FOUNDATION DETAILS

DESIGNED: DCC
DRAWN: DCC
CHECKED: PWM

JOB #: WTC100

C-11

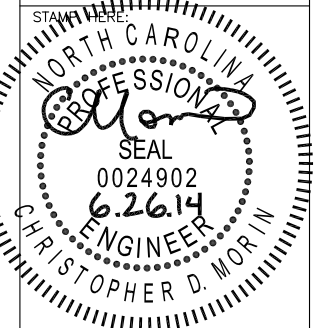
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BC architects engineers
5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2868
TEL: (703) 671-6000
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SUBMISSION:	FINAL CD'S

SHEET TITLE:
PROPOSED 50KW
GENERATOR
DETAILS

SHEET NUMBER:	REV. #
---------------	--------

GEN-4

N.T.S.

50KW GENERATOR SLAB DETAILS

1

